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ORIGINAL ARTICLES

PYURIA*

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In presenting this subject for the consideration of this association it is, perhaps, best at the outset to remark that by the term "pyuria," the writer has reference only to the chronic form arising from suppurative processes in the urogenital tract in which pus in the urine is the most persistent and tangible symptom. The accurate localization of the origin of this pyuria is absolutely essential for its elimination and it is in the hope of presenting the methods for differential diagnosis concisely and clearly that this subject has been chosen.

Pus in the urine may originate in (1) the anterior urethra, (2) the posterior urethra, (3) the prostatic follicles, (4) the seminal vesicles, (5) the bladder, (6) the right ureter, (7) the left ureter, (8) the right kidney or its pelvis, (9) the left kidney or its pelvis and (10) from suppurating areas in the neighborhood of and communicating with any part of the urogenital tract.

Various procedures have been made use of for the purpose of determining definitely the origin of a pyuria. It is unfortunate that the majority of the methods in general use are fallacious and it will be the endeavor of the writer to point out these fallacies and the means by which they may be corrected.

Preliminary to absolute localization, it is necessary to determine whether the suppurating focus is located in the urethra, the bladder or the upper urinary tract. The two-glass test of Thompson, and the three-glass test of Jadassohn, in connection with microscopical urinalysis, have been largely depended upon for this differentiation and while they possess undoubted value, are subject to error.

Briefly stated, in the Thompson test, the first glass is supposed to contain the products of suppuration from the entire urethra and the second such products as are mixed with the bladder urine or squeezed from the prostatic follicles. In the Jadassohn test, the first glass is presumed to contain the products of suppuration from the entire ure-

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the material squeezed from the prostatic follicles. Should the first thra, the second, the products from the posterior urethra and the third, glass be cloudy, the second fairly clear except for a few shreds, and the third more turbid, it is presumptive evidence of a posterior follicular involvement. Should the first glass contain shreds in a clear urine and the latter glass or glasses, no shreds, the indication is that the anterior urethra alone is involved. Should all three glasses be turbid in about the same degree, the presumption is that we have to deal with a suppuration which is back of the urethra.

These tests are not accurate for the following reasons:

(1) Should there be profuse suppuration in the anterior urethra, the products of suppuration will not be all contained in the first glass.

(2) The suppurative process may be confined to the posterior urethra and yet be so slight as to exhibit shreds only in the first glass.

These sources of error may be readily obviated by thorough irrigation of the anterior urethra previous to urination, the washing being kept for examination. These washings will contain what suppurative products are in the anterior urethra. What shreds or pathological material are passed at the subsequent urination must come from back of the compressor.

The questions which then arise are whether we have to deal with a posterior urethritis, a follicular prostatitis, a seminal vesiculitis, a cystitis or a suppurating focus located further up in the urinary tract.

If the urine passed in two glasses subsequent to irrigation of the anterior urethra exhibits shreds in the first glass and none or relatively few in the second, it is practically certain that we are dealing with a posterior urethritis. If both urines are cloudy in about the same degree or the second slightly more turbid than the first, the probabilities are that there is a follicular prostatitis present, possibly a cystitis, ureteritis or a pyelitis. Microscopical urinalysis is absolutely imperative and in the hands of a skilled pathologist will prove extremely valuable in identifying the different epithelia, etc.

If we have reached the definite conclusion that the suppurating focus is in the posterior urethra, we must determine the integrity or involvement of the prostatic follicles and the seminal vesicles. This investigation is best carried on as follows:

After urination the bladder is comfortably filled with a warm normal salt solution by the Janet method and the prostate carefully massaged, care being taken that the massaging finger does not extend beyond the limits of the prostate. The bladder is then emptied into a clean glass and the fluid saved for examination.

The bladder is again refilled with warm normal salt solution and the contents of one vesicle expressed, after which the patient empties the bladder, the fluid being kept for examination. The same course of procedure is pursued in regard to the other vesicle.

The fluids are then centrifuged and the microscope completes the differentiation.

Where we are called upon to differentiate between a cystitis and a suppuration higher up in the urinary tract, the following procedure commends itself as being easily applicable and fairly accurate.

The bladder is thoroughly irrigated through a soft rubber catheter until the washings are returned clear. The catheter is left in situ and the accumulating urine allowed to drain through it and collected. If it is cloudy and contains pus and epithelia in about the same proportion as the bladder urine passed before irrigation, the evidence is presumptive that we are dealing with a descending infection. The possible sources of error are obvious and may be avoided by cystoscopy and careful microscopical urinalysis.

If, as a result of these investigations, it is evident that the pus originates in that part of the urinary tract above the bladder, the questions as to whether the infection is unilateral or bilateral or is renal or ureteral remain to be settled. For this purpose, accurate segregation of the two urines is essential. The various segregators are, at the best, but makeshifts. They are inexact and are productive of much discomfort when in place, especially in the male bladder.

The catheterizing cystoscope affords us our only exact method of segregation and should be utilized where an accurate division of the two urines is essential. It requires no remarkable degree of skill for its employment and under proper precautions in technique is absolutely accurate and devoid of danger.

After the catheters are inserted into the ureters they are pushed up to the kidney pelves and the cystoscope withdrawn leaving the catheters in situ. After the first drachm or two of urine has escaped, the drainage is caught in two sterile bottles labeled " Right" and "Left," extreme care being taken that the catheter from the right ureter drains into the corresponding bottle and that from the left into its bottle. If no pus is found in these urines, the catheters are gently pulled down until they are just within the ureters and the drainage again caught in marked, sterile bottles, thus differentiating a pyuria originating in the kidneys or their pelves from one which is ureteral. The latter differentiation is seldom called for but completes the last link in the chain.

By the procedure outlined in this short paper, an accurate localization of the origin of a pyuria can be assured. That such localization is essential for successful curative measures, there can be no question. A pyuria accompanied by a dysuria must not be carelessly assigned to a posterior urethritis or a cystitis. Neither may be present and the kidney condition responsible for the symptoms, overlooked in a none too painstaking diagnosis, may pursue its course unchecked. An undiscovered vesiculitis, draining its infection into the posterior urethra

and by this drainage, making intractable the accompanying posterior urethritis, may prove the despair of the careless diagnostician.

Such conditions arising frequently in the every day practice of medicine seem to justify the purpose of this paper, to urge the application of methods of precision to the localization of a pyuria.

DISCUSSION.

Dr. J. D. Griffith, Kansas City: The Doctor has covered the subject so thoroughly in his paper that there is no room to discuss it. He made it clear that at least none of these pains can be readily established.

Dr. Herman E. Pearse, Kansas City: When the condition described by Dr. Mark exists, I would like to put myself on record as being in favor of examination by the renal character. I know there is some danger in this class of work. Some weeks ago I was doing some abdominal work and put a catheter up the ureter for a guide. The patient had bloody urine for about twenty-four hours due to the introduction of the catheter. I did not injure the bladder nor cause other injury. Any thing that can cause blood to enter the bladder is of some danger. Still, whenever it is necessary to clear up a question of the kind referred to and careful measures are taken against infection the danger should be slight. Catheterization of the ureter I have done a great many times. So far as I know I have never had any accident, other than the discharge of blood for a few hours mentioned above.

Dr. Mark, in closing: The only thing that I would add is in regard to the danger of infection in ureter catheterism. I would state specifically that where proper precautions and technic are employed the procedure is very free from danger. It is the consensus of opinion of those who have had large experience that the operation is practically devoid of danger from infection. I have done it hundreds of times and have never seen any infection, or trauma of appreciable degree. The procedure holds a definite place in the field of urology.

THE USE AND ABUSE OF THE OBSTETRICAL FORCEP.*

BY A. L. GRAY, M. D., ST. JOSEPH, MO.

Few instruments found in the physician's armamentarium are more extensively and universally used than the obstetrical forcep. Extensively so, because of the frequency of the occasion and universally so because, it is an instrument used by the general practitioner as well as the obstetrician.

The one fundamental principle in the use of this instrument is a proper understanding of the contour of the birth canal and at the same time the exact location occupied by the presenting parts. This is known as an axis traction principle, and notwithstanding it has been emphatically taught by modern teachers and extensively written upon by such men as Tarnier, Lusk and Simpson, yet its value is frequently over-looked by the general practitioner in the application of the instrument in every day practice.

The classification as to the forcep operations, is the High, the Medium and the Low operation, depnding upon the location. The High when the presenting part is engaging at the brim. The Medium at the center of the true pelvis, and the Low when the presenting part is pressing upon the perineum. This is not an accurate classification and no one can state that in a given case traction must or must not be made in a given direction, as each modification of this classification calls for traction in a certain direction.

The whole principle lies in this statement that traction must be made in a line following the exact axis of the true pelvis. If traction is properly made, equal resistance will be met anteriorily and posteriorly. In making traction conform to this principle, less compression is required upon the child, and less damage and risk to the maternal soft parts. Less tractile force is required, therfore less *necessary* compression; less bruising of the soft parts and besides, spontaneous rotation is favored. Therefore a proper understanding of the location of the child and the shape of birth canal will enable us to make a more speedy delivery in the high and medium operation by using an axis traction device, with less risk to both mother and child. However without a proper understanding of shape and contour of canal the instrument may become a dangerous one. The traction rods must be kept parallel to the handle, if not, the blades may be drawn aside and plough deep into soft parts, doing irreparable damage.

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Of course, great and lasting credit is due to Tarnier, and while the principle evolved in his instrument is correct yet I believe that the mechanism of the instrument is faulty. It is somewhat complicated and weighty, and has a tendency to fall apart while handling. Besides, for the general practitioner it is quite expensive. There are many modifications but without referring to each individually, I believe that J. Y. Simpson's presents the simplest and best type. It is 14 inches long, moderate pelvic curve, and rather small blades, English lock, with traction rods lying in apposition to blades when in use.

This instrument certainly substitutes mechanism for judgment, experience and dexterity, besides being a labor saving device.

No force is lost, and a person of average strength is able to perform a forcep delivery without being tempted to resort to an irregular and sudden display of force involving injury to the patient, and exhaustion to the physician. It has been but few years since our authors and teachers taught us that the high forcep operation was not a justifiable one. Since the discovery of the axis traction device it is conceded to be indicated and justifiable. The damage formerly done in the using of the straight forcep was due to the force being directed against the symphysis pubis, while the axis traction device allows the force to be directed backward and downward, following Carus's curve, allowing internal rotation and less risk to child and mother than podalic version.

The three mechanical principles involved in the use of forceps are traction, compression and leverage. The one to be desired of course, is traction, made in the proper direction. Now traction may be steady, rocking, or rotary. Ordinarily steady traction is preferable and will accomplish all that is desired but there are locations in which I am of the opinion that a slight pendulum motion is justifiable, and will accomplish much. It is not justifiable when the point of the blades is above the brim, owing to the great risk to maternal soft parts, neither is it justifitable when the perineum is tense, owing to the extreme tear which may result; but between these points, when the head is on one side of the blade, and the bony wall on the other, much time can be saved by using a slight rocking motion, as it will have the same effect as pulling a nail from a board, a cork from a bottle, or a tight fitting ring from a finger. The rotary motion is not justifiable, owing to the damage to parturient canal, and has no advantage over the rocking traction.

2nd: Compression is not a principle to be desired, and is only necessary and co-incidental with traction. A compression in one direction makes the diameter of the head in the opposite direction correspondingly greater, therefore no advantage results, besides the great risk of damaging the cerebrum of the child, hence only such

compression should be used as will enable you to make the necessary traction required.

3rd: Leverage is not to be considered in the use of the axis traction forceps but was much used in the employment of the straight forceps in the high operation, while the symphysis pubis acted as a fulcrum. There is another force sometimes referred to as dynamic in nature. It is the mere presence of forceps in the parturient canal stimulating contraction. In my opinion as we will see later, in considering the indications for the use of forceps, the pains are tardy because of exhaustion and are not stimulated by the use of a foreign body introduced into the uterine canal.

We will now consider the indications and contra-indications for the use of the obstetrical forceps. Ist: The indications are many. In a general way, it may be said that inability on the part of the mother to deliver herself, causing exhaustion is one of the principle indications. 2nd: When rapidity is required in the interest of mother or child. 3rd: Inertia or deficient uterine contraction. 4th: Slight disproportion between the size of head and parturient canal. 5th: Unfavorable presentation or position. As to the first I am of the opinion that exhaustion is the most frequent indication, and good judgment is often required to determine whether she will, or will not, be able to deliver herself.

If we observe that the uterine contractions are becoming more feeble, that the pulse is more rapid with a corresponding decrease of tension, that the head does not press forward and recede with each succeeding pain, that there is a tendency to increase of pallor, a diminution of vaginal secretion and general symptoms of fatigue and inability to muscular exertion, then we have an accumulation of forerunning exhaustive symptoms, which call for the use of the obstetrical forcep, and at this point by way of parenthesis I desire to say that no obstetrician can say how long a woman should be in hard labor before the forcep is indicated. It is positively not a matter of time, but one of conditions. A woman who is strong and vigorous with good circulatory tension and a well balanced nervous system may withstand a hard labor for 6, 10, 12 hours, without showing signs of exhaustion, while another less vigorous, may show exhaustive symptoms in a few hours, so let your judgment rest upon the conditions rather than the length of the labor.

2nd: When haste is required; as in eclampsia or in placenta previa when engagement has taken place or when sudden death of the mother has occurred, and the child is to be saved, or in concealed hemorrhage, rupture of the uterus, strangulated hernia, or dangerous symptoms of the foetus such as violent motion, rapidity of foetal heart sounds, passage of meconium, etc.

3rd: Deficient uterine contraction. There are times when by a

rest under narcotics or anaesthesia, or stimulations by means of quinine, massage, etc., we are unable to produce sufficient contraction for the delivery of the child, and nothing remains but instrumental delivery. Again forceps are indicated in a breech presentation in the delivery of an after-coming head, provided such delivery is attended with difficulty.

Now there are certain contra-indications to the use of forceps. They should not be applied to the hydrocephalic head, nor the decomposed head, for they will certainly fail to hold, and, even if they do, the end gained is not equal to the risk to the mother. They should not be applied to the perforated head, as it can better be handled with a cephalotribe.

Forceps should not be applied if the os is not dilated to ¾ of its full size and not then if the os is undilatable. The forceps should not be applied when there is a mechanical obstruction such as fibroids or carcinoma, for the friability of the cervix in these cases will greatly endanger the patient. Forceps should not be applied to the foetal head when the conjugate diameter is below three inches.

Again the forceps should not be applied until the amniotic sack is ruptured, and last, but not least, the forceps should not be applied until the head has engaged at the brim.

Had I not witnessed time and again the manner in which this instrument is mis-applied and used, I would feel it a duty to ask your forgiveness for presenting the technique of this operation, therefore hoping I may assist some one to become more skillful, I will present the modus operandi of this obstetrical manipulation. The patient, the instrument, and the physician should be prepared. The hair should be clipped from the labia majora and from the mons veneris, if long. The external genitalia, lower abdomen, inner thighs, and perineo-rectal region should be scrubbed with green soap followed by bi-chloride 1 to 4,000, and this, by sterile water.

The bladder should be catheterized. The forceps should be boiled in bi-carbonate of soda solution for 10 minutes and dipped in lysol solution as a lubricant.

The physician should cleanse his hands as carefully as in a laparotomy. The patient should be placed across the bed or, if a long and difficult case is anticipated, a table is preferable. Experience has taught me that these extreme precautions are necessary and I can truthfully say that in the delivery of 1,100 children in a period of 15 years, with 81 forcep deliveries, I have not had a case of infection, either sapremic or septicemic in character. During 400 births previous to 1891, I had 4 deaths, and I am confident now that none of these should have died had the germ theory been promulgated sooner.

Your patient should be anaesthetized. I prefer chloroform if delivery is likely to be affected in a short time, and ether if longer.

One assistant should hold each limb, and I should prefer to have the feet some six or eight inches higher than the bed or buttocks. Now is the time for you to introduce finger or hand, if necessary, and make an exact diagnosis as to the location of the fontanelles, and the direction of the sagittal suture. When possible or practical, apply the forceps on the opposite side from sagittal suture. It may not be practical in the high application, and in this case they can be applied to the sides of the pelvis and as soon as the head has reached the center of the pelvis, remove and re-apply to sides of head as you will less likely do damage to the child.

2nd: Do not make haste or become flustered, as you are doing a simple mechanical act, and a proper diagnosis of position and presentation will enable you to apply the forceps without difficulty. First take the lower blade in left hand and hold the instrument at right angle to your forearm. Introduce your right set of fingers within the cervix. Not one finger, nor two fingers, but as many fingers as your forcep blade is wide, and guide the blade to the side of the head. If it is in the high operation, it may be necessary to introduce the whole hand as a guide. By pressing the handle downward and toward the center, it will readily slip around the head. Make a similar manipulation with the upper blade. If properly applied they will readily lock. This application must always be made in the intermission of a pain. Tentative traction should be made to determine if the forceps will hold.

As to the use and application of the forcep in breech presentation, it is usually unnecessary. By the time dilatation of the cervix is complete, the breech is sufficiently low to hook the fingers in the thigh, and make enough traction for delivery. However, in a comparatively small pelvis with both feet up, the blades may be applied to the greater trochanter and a reasonable degree of force used without risk to the child.

Now as to the abuses of this valuable instrument. There may be a number of abuses to which the obstetrical forcep is subjected and for many reasons. Partly I may say from inability to properly diagnose the existing condition and partly from greed on the part of the physician. At times the physician will attempt to use the instrument where positively contra-indicated. For instance an application on a hydrocephalic head will result in slipping and perhaps cause great injury to the maternal structures. Again a man who is unable to properly estimate the size of pelvis may attempt to drag a normal child through a pelvis less than three inches, thus subjecting the mother to great traumatism and destroying child by using extreme traction and compression. 3rd: It is an abuse of the instrument and in opposition to its purpose to attempt to use it as a dilator as the fingers are more effectual and there is less danger of

severe tear and damage to uterus. 4th: We abuse the very intent of this instrument when we use more compression than the given amount of traction required and in this manner destroy the child or inflict permanent cerebral injury. 5th: The unskilled application by those who have had much experience is an abuse which we cannot pass lightly by. Physicians in haste or in ignorance of a proper understanding of the shape of the birth canal and the contour of head make grave errors in their adjustment. They attempt to place the wrong blade first, they do not use the hand to guide, they frequently use too much force in its introduction and are not careful to adjust lock, therefore do not apply to opposite sides of head. 6th: It is abusing a good article when we apply a straight pair of corceps in the high operation without having attached to said forceps some form of axis traction device.

7th: And now from an ethical standpoint, one of the greatest abuses of this instrument is its unnecessary use. We have the life and health of two individuals in our hands and yet for our mere convenience we are sometimes tempted to use them when unnecessary. We do so for the purpose of saving time or ending a tiresome and tedious wait.

The conscientious physician should not assume such a responsibility.

8th: And again from a pecuniary standpoint the instrument is used and abused and many a mother is subjected to a forcep delivery for the purpose of increasing the fee. This procedure smacks of graft and greed for notoriety and gain and should meet with the condemnation of all ethical and honest practitioners.

Remember brother, that your duty as an obstetrician is somewhat a sacred one and that you should no more allow yourself to apply forceps except as indicated, than the surgeon should operate upon a normal appendix for the sake of a fee. Let your indications be clear cut and do not subject your patients to the unnecessary risk unless the condition requires it.

DISCUSSION.

Dr. W. S. Allee, Olean.—I have always considered the forceps comparatively harmless in the hands of competent men, but the obstetric forceps in the hands of a fool is a most dangerous instrument. It seems to me the doctor lays more stress upon the preparation of the patient than is practicable in country practice. The patient should be clean and I believe in washing the patient, but I think shaving is an extreme measure. I seldom resort to an anesthetic. I have often applied the forceps with the patient unaware when that part of the operation was completed. Unless there is some reason for the use of an anesthetic other than the application of forceps, I believe it

is ill advised. I always listen to the suggestions of a perfectly normal patient, for naturally the patient will suffer pain if the forceps are not properly applied. In the case of a primipara, where great suffering has already been borne and the patient is in no condition to longer endure it, an anesthetic must be used.

Dr. W. E. McKinley, Denver:—The forceps are all right in many cases, but it is an instrument greatly abused by the general practitioner of medicine. Many practitioners use the forceps at times when it is really not indicated, or become impatient to visit another patient and use the forceps in order to get through more quickly, many times at the expense of the patient's strength. We should be careful to have the patient clean and the instrument throughly sterilized. With an anesthetic we would not be so likely to produce injury to the birth canal as without it. Without it the perineum will not yield so readily and we would necessarily be more harsh or rough in our manipulations.

Dr. Jos. M. Hale, Dearborn:—I consider this paper a very strong espousal of the forceps delivery. There are times when the forceps are indispensable. There are times when the forceps are absolutely necessary, but if we had the opportunity to examine our patient previous to confinement and could know the conditions of the pelvis, then, being called when labor sets in and knowing the size of the head as well as possible, we would be masters of the situation. Whenever it becomes necessary to resort to a high forceps delivery we should throw away the forceps and use podalic version. Version is always preferable to forceps unless you are too late to ascertain the existing conditions.

Dr. A. H. Vandivert, Bethany:—As to the technique, there are some things I can see no objection to although not always practical to carry out fully as described by Dr. Gray. But we can never be too particular when we have the opportunity. As to high delivery, I am satisfied that there have been many mistakes made in attempting to apply the forceps before the head was engaged. To lay aside the forceps and do podalic version as suggested will often relieve embarrassment, and you can deliver much more promptly and with less danger to mother and child. My experience has been that it is better to use an anesthetic. You do not know when the patient may change the position of the body and result in injury that may be embarrassing to you. When the anesthesia is profound enough for the patient to lie quietly you can do the work much more easily. It has been my experience that when a woman has been delivered with forceps once she will insist on the use of the forceps the next time because she was relieved of pain earlier and you may be over persuaded to use them earlier than is necessary. You must always bear in mind the condition of your patient.

Dr. L. T. Dunaway, Caplinger's Mills:—An honest confession is good for the soul. Before apply the forceps I do not make much preparation for I have not found it necessary beyond seeing that my hands, the forceps and the bed are clean. One point in the paper was overlooked, namely, the removal of the forceps before complete delivery.

Dr. C. T. Ryland, Lexington:—The best thing in the paper was the description of the *modus operandi*. The most surprising thing I have met with is the ignorance displayed by the general practitioner in applying the forceps. I once saw a man try to apply them with the forceps locked. As for cleanliness, some men will take them out of their dirty old grips and apply them without so much as wiping them off.

Dr. M. S. McGuire, Arrowrock:—Recently my assistant was a nurse from a hospital. When the patient had been in labor forty-five minutes the nurse got restless and asked me if it wasn't time to deliver that head. Of course it wasn't and I informed her that she was the last one to get uneasy. A half hour later she asked the same question again. I found before I got through with the case that she had been associated at the hospital with physicians who consummated delivery without waiting, as they were anxious to get through with as little delay as possible.

While one of the gentlemen has spoken of the fact that the country physician is not entirely acquainted with the technique of the application of the forceps, I want to say that I have had a very thorough demonstration of the fact that our brethren in the cities often use the forceps too early. In using the forceps in the country I have had to use them at times when I had no help at all except some neighbor woman. But you cannot be too cleanly, even if you are at work in a log cabin. You should be just as aseptic as under any other conditions. I differ with Dr. Allee and say that we should consider all cleanliness as essential.

Dr. Allee:—I did not say it was unnecessary to be clean, but that it was not necessary to shave the patient.

Dr. McGuire:—If we omit some parts of a cleanly preparation we are likely to omit some essential parts. I thought Dr. Allee's remarks too slack for imitation. I do not think we can be too cleanly, even to the shaving of the parts, and it saves annoyance in applying the forceps. Some anesthetic should always be used. I do not think it is possible for a man to apply the instrument without a great deal of pain to the patient unless a sufficient anesthetic has been administered to render the patient unconscious of the pain. I have found a lacerated perineum where there had been no attempt at repair and the patient did not even know that she was in such a condition.

Dr. Gray, in closing:—I believe it is as necessary to be aseptic

in the application of the forceps as in doing a laparotomy. You will never have a case of septicemia if you are absolutely clean. But one condition can exist where the woman can infect herself and that is a pus tube before pregnancy. If the woman otherwise becomes infected and has fever it is because of the physician or the nurse. Before the examination we should cleanse the patient and our own hands perfectly. I cleanse my hands with a scrub-brush and soap, have the patient bathed and the long hairs clipped by the nurse, and I make as few examinations as possible. As to taking off the forceps before the child is born, I believe the physician can usually have better control of the head of the child by leaving the forceps on. If the perineum becomes very tense you can control the on-coming head better with the forceps than otherwise.

THE GASTRIC NEUROSES.*

BY VICTOR A. BLES, M. D., ST. LOUIS.

Those ancients who placed the location of the human soul in the human stomach were not quite so bizarre in their assertions as might seem to the average unmedical mind. *Mens sana in corpore sano* has always held good and, as the stomach plays the all-important part in the conversion of our food into substances which form the proper materials for the repair of tissue waste, the stomach's share of the task of keeping the equilibrium between body and mind undisturbed is proportionately heavy.

Although functional gastric disorders are common enough, they are generally secondary to, or concomitant with, other morbid states and those gastric diseases which are primary and are purely neuroses, being of neurologic as well as gastricologic interest, are rare.

The definition of course is simple. Stress must be laid upon the neurotic or functional feature and the absence of anatomical lesions which could account for the oftimes grave conditions met with. Naturally enough genuine anatomical lesions may result from continued functional disorders but are then only secondary.

When we look into the etiology of gastric neuroses we find it difficult to separate cause and effect and to decide which is the first link in the vicious *cable sans fin* formed by central and peripheral neuroses.

And before touching upon the subject of gastric neuroses I would say a few words on the subject of neurasthenia in general. There are those who would minimize the importance of this condition. Some ridicule the thought that neurasthenia should be considered a separate morbid state and class its manifestations as the outcroppings of a simple nervousness. To me neurasthenia is a true disease, even if its symptoms be so obscure as to be often misinterpreted, its pathology

*Read before the St. Louis Medical Society, meeting of March 31, 1906.

practically unknown, its duration so great as to cover a life time. Great is, to my thinking, the responsibility of him who, in the midst of the universal rush for money, fame, knowledge or power, takes just enough time to marry and beget children with the chance of burdening them with the burden of neurasthenia. And deliberate race-suicide is not always selfish but may be in reality altruistic. The choice of a wife undoubtedly is a strong factor in the propagation of the modern curse, nervousness. Only too many of those, whose nervous economies are but too easily affected by every wind that blows, choose for life-partners the ones who are "congenial," which means that they are as neurasthenic as themselves. It is plain, therefore, that heredity is a factor in the causation of gastric, as well as general neuroses, and will be a stronger one as civilization advances and we drift further and further from the simplicity of our forefathers. It is all the plainer to me as I watch apparently big and robust men and women show neurasthenic manifestations such as one would expect from a chlorotic girl at puberty. Furthermore the number of pychoses of all kinds is steadily increasing and especially of those which evidently require a certain inherent and inherited predisposition towards nervous degeneration as well as a specific base.

The greater number of sufferers from gastric neuroses are women before the menopause, the young adult women, as might be expected from the fact that they form a large majority of those who suffer from functional disturbances generally. Hard and fast rules cannot be laid down. Although often we can recognize the type of the true "dyspeptic," yet at other times we find the sufferers from extreme gastric disorders of functional nature remarkably well-preserved. This lack of consistency holds good when the predisposing factors are taken into consideration. For, although those of a higher order of civilization, those subjected to severe mental strain or those upon whose shoulders rest a host of social duties, are more apt to find the nervous mechanisms of their gastric functions impaired than those of lower degree, yet we find many cases among working people, even in those whose labors bring them constantly outdoors, such as farmers, soldiers and even sailors. Sexual excess is a prominent predisposing cause in both sexes.

In making complete examination of the patient's condition we panied by other neuroses of various kinds, indicating general neurasthenia or the possession of that unenviable attribute, a nervous temperament. Headaches, vertigo, mental depression, insomnia, neuralgiae in various forms may in turn mask or be masked by the gastric symptoms and it can readily be seen that it is not always an easy task for the specialist to determine if the general neurasthenia or the gastric neurosis be the primary state, which is an exceedingly important matter when it comes to the treatment of these conditions.

Then there is the group of cases which are purely hysterical, without a sign of organic lesion, purely mental.

At this junction let me say that there is a vast difference between true neurasthenia and true hysteria. Only a few weeks ago one of the members of this Society, a specialist of no mean ability, referred to neurasthenia as "innate cussedness," evidently having hysteria in mind. Neurasthenia is an impoverishment of the nervous system just as anemia is an impoverishment of the circulatory system, while hysteria is purely mental.

Gastric neuroses may be due to irritation of brain and spinal cord, of testicles, kidney, liver, or again to pressure upon some plexus of nerves, connected with gastric functions, as in lordosis or scoliosis. There may be a direct interference with central gastric innervation such as takes place in the medulla in cases of tabes dorsalis, giving rise to the well known gastric crises.

Eye-strain has been called a cause but is probably more a concomitant manifestation of the general neurasthenic condition. Such irritation may come from actual myelitis or again from so-called hysterical spine. The genito-urinary apparatus may be at fault, causing a toxaemia which weakens the nervous system and is exhibited through the gastric functions. Toxemiae of all kinds, from the sensation of fulness after a hearty meal, calling for a demi-tasse or a thimbleful of liqueur—and which is really a mild form of tonic poisoning—to the grave conditions arising from chronic constipation, or from fermentation of the stomach contents with formation of noxious gases, all may serve as causes to weaken the motor or digestive mechanisms of the stomach and to be made effects in their turn.

Alcohol, tobacco, coffee in excess, all sorts of states, conditions and diatheses, gouty, tubercular, malarial, and, not the least of all, syphilitic, all may play their parts in creating conditions which publish themselves through means of the much abused and long-suffering stomach.

And, although such gastric neuroses, being temperamental, are, *e rerum natura*, mostly chronic, yet, if due to extraneous, removable causes, they may be but temporary, such as those arising from genito-urinary disorders, from curable psychoses, from hysteria or from pregnancy. Or again they may be quite fugacious as are those due to the cerebral anemia of seasickness or the cerebral congestion of sunstroke.

The literature on the subject is extensive and I will not burden your patient ears with a recital of the names of men who have distinguished themselves in the realm of stomach work. It will be sufficient to state that a remarkably long time ago, as early as 1790, and even earlier medical men had a clear conception of gastric neuroses as primary disorders (Comparetti), while since then contributions have

been made by men of all nationalities. French, English, German and Italian.

It is essential to an intelligent dissertation on the subject of gastric neuroses to briefly review the nerve supply of the stomach.

The principal nerves are the two vagi which, below the neck, travel along the oesophagus, the left or smaller one on the anterior aspect, the right or larger one posteriorly. It must be remembered that, long before they reach the stomach and ramify into their final divisions, in fact as soon as they reach the oesophagus, they give off a large number of filaments which form a delicate plexus in the substance of the oesophagus and so reach the stomach, so that for experimental purposes not only must the two vagi be cut in order to sever the connection with the central nervous system, but a circular incision must be made through the muscular coat of the oesophagus.

The left nerve passes to the cardia and lesser curvature, forming the anterior gastric plexus, two-thirds of the right vagus passing on to the abdominal viscera, the other third forming the posterior gastric plexus. The terminal filaments of both pneumogastrics anastomose extensively with the sympathetic system.

The sympathetic system plays its part in the control of the stomach through the celiac plexus, the *cerebrum abdominale* of the ancients, which gives rise to a number of secondary plexuses, such as the coronary and hepatic which supply the lesser, and the inferior coronary which innervates the greater curvature of the stomach. All these plexuses, as said before, are intimately connected with the terminals of the vagi, thus explaining many reflex phenomena. Intestinal plexuses also find their origin in the nerve supply of the stomach which accounts for the almost universal concomitation of intestinal with the gastric symptoms.

We are told that experiments with the nerves controlling the stomach have failed to show that they directly affect the secretion, although the severing of the vagi generally causes cessation of the flow of gastric juice.

We know that the activity of the gastric glands cannot be only due to the entrance of food or saliva into the stomach for, in a case described by Richet and in which the oesophagus was totally occluded, preventing the possibility of food thus reaching the gastric mucous membrane, a fistula had been established for the observation of the gastric secretion. The mere chewing of substances of a decided character, sugar or lemon, produced a copious secretion of gastric juice. Which shows that the stimulus was a reflex one although produced directly through nerves of special sense without intervention of psychical processes. It is clear that in a case where the slight of appetizing substances produces a flow of saliva or gastric juice, the process is

different for there is first created a mental impression which in turn causes the secretion.

These mental processes may act as inhibitory influences to the general *tone* of the gastro-intestinal tract. We all know the influence of fear upon the gastro-intestinal as well as genito-urinary tract. We all know how fear or sudden excitement will cause the food to "stick in one's throat," how anger will cause food to "lie like lead on one's stomach" and even to be vomited in undigested condition. But the severing of the external nerve supply does not always stop gastric activity so that it is probable that there exist within the stomach walls ganglionic centres which act upon the glands along sensory paths. This activity, however, in such cases only follows direct mechanical stimulation.

Where a condition presents so many phases a description can be much simplified by a classification either according to its etiologic or to its symptomatic features, but in gastric neuroses the causes are so many and the symptoms so varied that a classification combining both methods, such as adopted by Ewald seems best. He, then, recognizes conditions due to irritation, to depression of the gastric innervation and those due to both. Again, since the nerve-supply of the stomach controls its motor power, its sensation and its secretion, we have as many more subdivisions.

Among the sensory neuroses due to irritation we find hyperaesthesia which, if strong enough, gives rise to what is sometimes classed as a separate condition: nausea. This hyperesthesia may be mild as in the case of a young child vomiting its food without probably any more serious cause than having played too hard, or it may be strong as in hysterical vomiting or in the neuroses caused by extraneous organic disease, e. g., cerebellar tumor.

We will pass over the well known fact that stomachs have their individual idiosyncrasies. What medical student has not marveled at the fact that one grain of quinin could cause a patient to be covered with a scarlet fever rash? Who of us has not seen the urticaria which follows in certain individuals the eating of strawberries or lobster?

We will also mention but briefly the variations of hunger due to irritation of the hunger centres. These are loss of hunger or anorexia and excessive hunger or hyperorexia. It must be remembered that the sensation of hunger, although varying with the condition of the stomach, does not arise there but in the hunger center in the medulla and is caused by the ebbing of metabolism.

In speaking of anorexia as a neurosis we do not include the loss of appetite incidental upon some organic stomach condition, but that loss due to hyperesthesia of the stomach or to irritation of the central nervous system. There may be a genuine repugnance toward food so that at last the patient may starve himself, or may eat a few bites and

then find it impossible to eat more. Other cases refuse to eat because they do not feel the need of eating. It is needless to state that many of these cases are hysterical.

A more interesting idiosyncrasy is that of hyperorexia or *Bulimia*, ox hunger, also called cynorexia or *fames canina*, dog hunger. This condition is either primary and connected with gastric hyperaesthesia of nervous origin, or secondary to other gastric conditions, such as hypersecretion, or to diseases of disturbed metabolism, such as diabetes or Addison's disease. Examination of stomach-contents shows that in some of these cases the stomach is emptied in an incredibly short space of time, while in others the time of food-passage may be normal or even retarded. We find this condition, moreover, during convalescence from acute diseases, after operations (gastroenterostomy), in connection with uterine disorders, and Pavy has observed it in a condition of a peripheral irritation due to worms. This condition may be exceedingly annoying to the patient as the craving for food may come at any time. It may be temporarily satisfied by the ingestion of any trifling amount of food, showing that the sensation is central in origin, and it often comes with a stomach full of food, which distinguishes this condition from polyphagia, in which the craving only comes after the digestion of the food previously swallowed, while in akoria there is a lack of the feeling of satiation and the patient might go on eating forever. The condition finally becomes exceedingly weakening.

That the many gastralgiæ may be of very varied origin goes without saying. The causes may be local or central. The pain generally is quite severe but not always localized, often diffuse. The duration is from a few moments to several hours. Generally speaking the attacks are self-limited and are followed by exhaustion, while their neurotic character is shown in their being eminently independent of the taking in of food. True gastralgiae or gastric neuralgiae without any sign of anatomic lesions are rare. When they exist, they may be secondary to a condition of hypersecretion which irritates the terminal filaments of the vagus nerve. Gastralgia is often hysterical and, as we only have subjective symptoms to judge from, the diagnosis from a true gastric neuralgia is often quite difficult. In such cases a study of the patient's behavior, a careful search for other hysterical acts or manifestations, the possible presence of morbid mental states with the usual cravings for sympathy and attention, are most helpful in the rendering of a decision.

Neurasthenic gastralgia is, as the term implies, due to true atony of the central nervous system, a weakness which manifests itself by alternate conditions of irritability and depression. In the first we find migraines, painful points and electric irritability, the pain being severe and more circumscribed. In the depressive form the symptoms

are much vaguer, the pain diffused and the mental state one of exhaustion as is often shown by profound sexual weakness. In my own practice I found one case, however, in which sexual excesses had produced decided gastric irritability and hyperaesthesia. In this case there were severe gastralgic pains, vertigo and vomiting. During the attacks the patient's expression was anxious, there was evidently a sense of impending calamity, the pulse being rapid. These attacks ceased suddenly and the patient ate well and went back to work, thus presenting almost a typical picture of tabetic crisis, which was excluded by a careful examination of the central nervous system. There was no history of dietetic error and one would have looked for profound depression rather than irritability.

This leads me to refer briefly to the subject of gastric crises, much of our knowledge of which we owe to Charcot. A gastralgia apparently unconnected with organic disease of the stomach always calls for a careful examination of the central nervous system. As these crises may make their appearance early in the history of the case, frequent errors in diagnosis are unavoidable and many cases of repeated supposedly ordinary colicky attacks have finally died the death of the tabetic. A search of a few minutes' duration may give us the presence of Westphal's or Romberg's symptom, a pupillary inequality in size or action, or of pharyngeal anaesthesia. The cause, as remarked before, is irritation of the vagus at its commencement in the medulla. The pain is fulminating, running up from the groins to the epigastrium, or in the shoulders, radiating downward. There may be vomiting, severe, continuous, uncontrollable, of mucus, blood or bile. The pulse is generally hastened. There may be headaches and vertigo. Then the picture changes with almost uncanny suddenness. The patient, so recently sick unto death, is a well man and demands food. The examination of the stomach generally gives negative results. These crises have also occurred in multiple sclerosis, myelitis and ophthalmic goitre.

There are two conditions of nervous irritation which affect the secretory functions of the stomach: hyperacidity and hypersecretion.

The first is naturally relative. Just as there is no definite standard for the force of the normal kneejerk, so we cannot draw a distinct line and say where hyperacidity begins as normal acidity varies with each individual.

Hyperacidity has been noticed in the hysterical, the melancholic, the neurasthenic; also in connection with biliary and renal calculi. It is principally to be distinguished from the hyperacidity accompanying gastric ulcer.

Hypersecretion or gastrosuccorrhoea is a totally different condition. The acidity may be increased absolutely but not comparatively. The increased flow may be started by the ingestion of food or it may

occur continuously, while the stomach is full or during a fast. It has been observed to the amount of two pints and the fluid is to all intents and purposes gastric juice without any remnants of food, but sometimes containing bile.

The pathology of this condition is rather obscure. Some claim that it is simply a prolongation of the normal reaction to the food stimulus. Others hold that it is absolutely uninfluenced by food. As might be surmised, the increase of gastric juice hastens the digestive process, at least of albuminoids, and increase the appetite. We do, however, find that this increased appetite and hearty eating, in conjunction with the underlying element of neurasthenia, is apt to bring about a condition of atony with, subsequently, a true organic degeneration of the muscular coat and finally gastrectasis.

We now come to a review of the neuroses of the stomach's motor mechanism. As none of these conditions rarely occur alone, but mostly in company with other neurotic motor manifestations of the gastro-intestinal tract, it will be well to group them together.

Here, then, we have eructation or nervous belching, the annoying condition which excludes the unfortunate sufferer from social intercourse by force of its explosions. It must be but a sorry comfort for the sufferer to know that the escaping gas is odorless and tasteless, differing in this respect from that raised in true fermentative processes. Its presence probably arises from atmospheric air being swallowed and forced up again by increased contractility of the stomach, assisted possibly by pyloric rigidity alone, or combined with atonic relaxation of the cardia. In a few cases the belching was so rapid that the patient could not possibly have swallowed the air and there was considerable doubt as to the expulsion of any air at all. This belching may be purely hysterical and performed at will.

There exists also a nervous pyrosis or heartburn with the sensation of burning, produced by the regurgitation of stomach contents which, however, are perfectly normal.

We have also a neurotic tympanites or filling of the stomach with atmospheric air which is retained by spasm of the cardiac and pyloric sphincters. These distentions may push the diaphragm up, cause a dyspeptic asthma and are relieved only by an upward escape of the gas.

A condition of great interest is seen in that of nervous vomiting which is a reflex symptom of serious diseases of the central nervous system or other organs or may be reflex from obscure neurasthenic or hysterical conditions. It is generally unaccompanied by retching, may be periodical or come after ingestion of certain dishes. It may be reflex from gallstone or brain tumor. It is claimed by some to be frequent in neurasthenia, by others to be rare. Personally I have found it to be rare. I have also found that in neurotic persons attempts to produce vomiting artificially for the removal of undigested masses

meet with but indifferent success, the irritation of the fauces seeming to induce a decided spastic tightening of the cardiac sphincter.

Among organs which reflexly cause vomiting the principal one is the uterus in pregnancy which, by its steady enlargement, presses upon the sympathetic nerves. As soon as the pregnant womb has risen from the pelvis the pressure is released and the vomiting stops. Several cases of apparently pernicious vomiting of pregnancy have proved to be hysterical and ceased under stress of great emotion.

We close the series of irritative conditions of the gastric motor-mechanism with a brief reference to simple increase of motility and peristaltic action. We have an increased action of the muscular coat, so that the chyme passes into the intestines more rapidly than normally. There is generally a hyperchlorhydria present. Ewald claims that this increased action may be assisted by an atonic insufficiency of the pylorus, but, in view of the fact that the condition is one of irritation and pathologically increased muscular tone, I would rather believe that this precipitate propulsion of stomach contents took place in spite of a contracted pylorus, rather than with the assistance of an incompetent pylorus.

Now let us consider the conditions due to *depression* of the nerves in control of the stomach.

Just as we could draw a picture of bulimia, a condition of voracious appetite due to *irritation* of the hunger centers, so we have the companion portrait of increased appetite due to *depression*, akoria, a negative condition, a lack of the feeling of satiation. This affection is rare and to the discredit of mankind must it be said that many reported cases are simply those of remarkable gluttony.

Nervous anacidity or lack of HCl is, according to some writers, fairly frequent and is often found in hysterical subjects. I wish to enter a protest against the use of the word *anachlorhydria* to indicate a lack of HCl. This word does not reflect credit upon him who coined it. It should have been *achlorhydria* as the prefix *a*, the *alpha privans* of the greek grammars, indicates: a lack of. Only when a word begins with a vowel is an *n* added, as in anorexia, anæsthesia, anæmia. The prefix *ana*, however, signifies an onward or upward or constructive tendency, as in anacrotism, anabolism, so that anachlorhydria in reality would mean an increase of HCl. Who of us does not remember the days of our Greek studies when we read *Xenophontos Anabasis* or Onward march of the Ten Thousand?

A partial or total relaxation of the cardia gives rise to a condition of regurgitation in which small particles of partially digested food are brought back into the mouth, swallowed again or expelled. This leads us up to an exceedingly interesting, if rather disgusting condition, that of true rumination.

It must be remembered that many cases of so-called rumination

are in reality only those of regurgitation, in which the particles are, as remarked before, partly digested and possess the well known bitter taste which is not due to HCl but to the presence of peptones. Just as the introduction of bovine vaccine virus led to the superstitious fear (so eloquently portrayed by the great caricaturist Hogarth) that forthcoming generations might bear horns or have other cattle-like attributes or deformities, so the observation of the phenomenon of rumination led our progenitors to believe that something oxlike or goatlike in the parents caused children to be thus afflicted or made those progenitors cast an even more serious reflexion upon the morality of the parents. Such a reflexion is probably ungrounded for even in this twentieth century we see many members of the human family with a good deal of the ox and of the goat in them, which was undoubtedly handed down from father to son, without there being created any cases of rumination.

This phenomenon is thought to be made possible by a sacculated condition of the cardiac end of the oesophagus and a temporary paresis of the cardiac sphincter, while in some cases the stomach was also found to be much dilated. The underlying cause is probably central as the sufferers are frequently neurasthenic and hysterical. Example and especially heredity are strong factors in its causation. Great mental excitement and complete change in mode of living have been known to bring about a cessation of this neurosis. The particulars of this condition do not make up into a pleasing pen-picture so I will merely state that the pieces of food, on being brought up, are said to be remarkably unaltered in taste and often come up in a regular order, inversely to the order in which they were swallowed. In some the habit becomes so necessary to the patient's health that expectoration of the regurgitated masses led to great emaciation and the habit had to be continued. (Sauvage).

Ewald is very definite in classing muscular atony as a primary gastric neurosis, apart from atony of the secretory apparatus. When, however, it is remembered that gastric atony is a manifestation of true neurasthenia, it must for many of us be hard to believe that such a fine distinction could be made that the same neurasthenic stomach could digest food normally but fail to send it on its way. In fact I believe that the normal digestion of food and the presence of the acid chyme act as stimuli to normal peristalsis. Also it is well known that in cases of complete inhibition of the gastric functions, as by fear or anger, in subjects easily influenced by such emotions, not only does peristalsis cease but the food remains practically undigested.

Having before us now the consideration of neuroses due to conditions of irritation and depression in the same subject I believe we may pass rapidly over a condition, which some regard as a primary neurosis, in which a relaxation of the abdominal ligaments in general

causes a general sinking of these abdominal viscera, including a gastroptosis. The multiplicity, the variability in intensity and occurrence of those symptoms, combined with the fact that in some cases there may be no symptoms at all to indicate a gastroptosis, gives some idea of the difficulties connected with making a diagnosis of primary atony of the visceral ligaments. Patients have been operated on for suspected neoplasm when only a general sinking of the abdominal visceral was found. In one case the manipulation of the abdominal organs during the course of the exploration seemed to act as a massage or stimulus, so that in a few weeks the patient was discharged as cured, the viscera having resumed their normal functions (Poltowicz, Roux). *En passant* it may be interesting to state that tight lacing and the abdominal relaxation incidental upon the child-bearing period are important causative factors to this condition, accounting for the greater frequency of this condition in women.

The principal condition due to instability of the general nervous system, manifesting itself through symptoms arising from irritation and depression alternately, is nervous dyspepsia or neurasthenia gastrica, which naturally enough, considering the nature of the disease, includes many of the other gastric neuroses. Here more than anywhere in the domain of gastric disorders does the difficulty of separating cause and effect make itself felt. Of late much of the vagueness of knowledge which enveloped nervous dyspepsia with a mantle of obscurity has been cleared up and men like Jurgens have reported direct anatomical changes such as degeneration of certain plexuses and of the muscularis mucosae in what were considered cases of purely nervous dyspepsia (Sasaki, Blaschko) and especially in cases where the neurasthenic condition was caused or accompanied by anaemia.

Intestinal disturbances nearly always keep step with the gastric and the picture formed by constipation, alternating with diarrhoea, under stress of great emotion, by variable appetite which may be excessive and independent of the presence of food in the stomach, by the irregular gastric pains, generally not over-severe, and by the frequent and annoying accumulations of gases is well known to the general practitioner as well as to the internist.

The aetiology is varied as the name implies. In the majority of cases there are no anatomic lesions and the cause must be looked for in the many states and conditions which predispose to all neurotic manifestations. Business care, lack of exercise, sexual excesses, hysterical manifestations, may be the causes. This disturbance proves, more than any other, the necessity for making a careful diagnosis and for instituting a patient search for the least signs of organic disease. A thorough study of the patient's actual condition, not only, but of his temperament and habits, so as to prescribe the proper surroundings, occupation and diet, is absolutely indispensable.

Let us not linger on the subject of the many idiosyncrasies with which the neurasthenic stomach can surprise us. Enough be it to say that there may be a slight hyper-or subacidity, that vomiting is rare and often even difficult to produce artificially, so unlike the easily produced hysterical vomiting, and that the faeces may be normal, flattened or tubular. The ordinary symptoms of gastric disturbance often fail for the patient may be quite healthy-looking, the tongue is clean as the average healthy human's. At one time the patient may be transported with joy at the fact that he does not "feel his stomach," but soon he may be in the depths of despair at the thought that a terrible incubus of ill-health is to be his for the rest of his life. He may be as touchy to the changes of the weather as the oldest rheumatic and a bad cold may make him look as if he had been ill for weeks.

The prognosis is as uncertain as the cure of general neurasthenia itself would be. Years and generations of heredity may have to be fought tooth and nail, some habits may have to be formed, others overcome, conditions changed, so we must expect that, while in some cases we may succeed in making a new man of a patient, in others we find such a resistance to therapeutic efforts as to make the most valiant heart grow weary.

The treatment in general, then, must be tonic, quieting irritations, stimulating a state of depression often by suggestion, improving in the meantime the bodily health. And, although a thorough study of dietetics is necessary and of the greatest importance, yet I find that in true neurasthenia generally a wholesome, generous diet, omitting, of course, rich and irritating foods, often gives better results than a rigid, painstakingly selected diet.

Of the drugs only a few need be named: arsenous acid, nitroglycerin, caffein or the phosphates of iron, quinin and strychnin. I have found long-continued exhibitions of quinin up to the point of cinchonism excellent in obscure conditions, in which there was reason to think that there was a malarial taint, even if the history of malaria was remote or doubtful.

Bromides of sodium or strontium, the phosphide of zinc, salol, beta-naphthol, massages, lavage and intra-gastric as well as the Scotch douches externally, electricity to a small extent. Iron in anaemia, especially when given as an albuminate. A host of purgatives and cathartics must be constantly borne in mind.

Following the doctrines of Tolstoy, who regards modern advancement and civilization as direct attempts to evade the primary curse: In the sweat of thy brow, etc., which we know was not a curse but a wise and humane law, and who holds that a return to actual manual labor will solve the problems of the world, I am a strong believer in outdoor work for those who are not used to it. Horseback riding, golf, sea-voyages, camping out and especially walking, all are great helps i nthe

work of restoration. The mental influence, obtained by a change of surroundings, combined with the medicinal benefit derived from life at some mineral springs, is well known.

In conclusion I would say that too much cannot be said about the care with which opium and its derivatives should be given to neurasthenic patients, useful as these drugs undoubtedly are to subdue hyperaesthesia of the gastrointestinal tract. Given a neurasthenic subject, a human being full of idiosyncrasies, habits and notions, generally abnormally sensitive to the action of most drugs, is it not plain that only too easily the servant might turn upon us and become master, and clutch our patients in a grasp from which no human power can free them? Even as I have avoided the recital of cases from my practice, so will I refrain from laying down rules for treatment and from the naming of medicines or therapeutic agents to meet particular conditions. Here more than anywhere else does the individuality of man rise up to confront us so that each of us must needs work out his own salvation, using the best of what medical and general education, knowledge of life and of human nature have placed at his disposal.

I, for one, feel deeply how far down we must look for the underlying cause, how strongly the undercurrent works against our pigmy efforts and how the application of therapeutics can only affect the surface as does the surface of water respond to the imprint of a pebble which the fierce undertow may sweep away out of our ken.

The final cure of neurasthenia must lie in prevention and ours is the duty to inject the prophylactic antitoxins of education, advice, and comfort where we can, carrying, as it were, stone by stone, brick by brick, a handful of plaster here and a pinch of cement there, the material which is to go into the glorious structure of a regenerated humanity.

I do not go beside the subject of gastric neuroses when I declare that our great struggle must be directed against the complexity and artificiality of modern life, for the nervous system has to pay the piper and the patient stomach is generally made to bear the brunt of the burden, as is a certain domestic animal, until patience is strained to the utmost and the time has arrived to object, which the stomach then does, frequently, strongly and with effect.

The world cannot grow better until we have taught men and women how to marry, and parents how to bring up children in the spirit of self-control, simplicity of body and mind and of unselfishness. The great church universal cannot be all-encompassing until men and women have learned that it is better to lay up the treasure of a sound mind and body than to hand down to their offspring the heritage of wealth and degeneration. The great brotherhood of man cannot come into its own until, by at least a partial or periodic return to the simplicity of the prototype, the brain is cleared of the toxemiæ

which suffocate it by their noxious vapors and which irritate and depress the human mind to the level of that of foul animals. Unfortunately rare, but rarely fortunate is he who, by force of will and by aid of circumstance, can cling to the rock of simplicity, *saevis tranquillus in undis*, calm though surrounded by raging waters.

What I have said may be old and hackneyed to those who have gone deeply into this subject of gastric neuroses. The race of general practitioners who class all gastric disorders of more or less obscure nature as "indigestion" is fast becoming extinct. Even they, who do not delve as deeply into these matters as we who devote special attention to this subject, recognize the necessity for the most careful diagnostic methods, physical and chemical, and that neuroses of the stomach occupy an important place in the phalnax of nervous manifestations.

DISCUSSION.

Dr. Charles Shattinger: It is no small merit of the doctor's paper that it suggests so many trains of thought in connection with the stomach, anatomical, pathological and clinical. Thus in outlining the nervous supply of the stomach he called attention to the secretion being produced in the stomach with complete occlusion of the oesophagus and with the exclusion of any psychic stimulants. That is corroborative of the fact that the secretion of the stomach is excited by the movements of mastication independently of ensalivation. Hence we may say there are three ways of producing gastric secretion, psychic, masticatory and organic. I thought I heard the doctor say there was no direct nervous supply in the stomach by way of acting upon its secretion. I am under the impression that the secretory function is under the direct control of the vagus and sympathetic, the first psychic and the second organic, independent of the mind or any outside influence. One condition that has interested me particularly because of the extreme difficulty of handling it, is that of nervous eructation, a state in which you can find nothing that can explain to you how this is brought about, and I was very thankful to obtain a clue at one time which experience has corroborated, i. e., that these people often are partly responsible for the eructations by the efforts they make to belch. They feel a fullness and they try to relieve this by abdominal pressure. In doing this they press upon the stomach and empty it partially, force the air out, and with the following relaxation of the stomach walls, air is sucked into the stomach. Now, if these patients are intelligent, and you call their attention to this fault, it will very effectually help. Of all the methods I have tried, but one has seemed to be of any particular use, and that is abdominal massage. As to the treatment of these conditions in a general way, great stress should be laid on the point, that, with a few exceptions, such as abdominal massage, lavage (not for cleansing the stomach, but for the effect it has on the nerves of the stomach) and gal-

vanism, the treatment should always be general and not local. The doctor as well as the patient must have attention drawn away from the stomach and directed to the condition of the patient as a whole. In the matter of exercise, for instance, it will never be sufficient to tell that patient to walk. There should always be some mental stimulus coupled with these proceedings to derive good from them.

Dr. Grindon: Dr. Bles' reference to the fact that rumination was at one time supposed to be significant of the horned ancestry of the sufferer, reminds me that Fabricius of Aquapendente in the 16th century wrote an article on the subject. He refers to one patient from whom he learned that his father had a horny growth upon his forehead and says it was thus given us to know that there was a bovine tendency in the family.

Dr. Robert Barclay:—I believe the author gives the dimensions of the growth. He saw the growth which he describes. He adds, that he saw also another case.

Dr. Bles, in closing:—I am a strong believer in neurasthenia and in heredity, but I cannot believe that people are born with a hereditary tendency to gastric neuroses in particular. The build and general condition may account for much and education, training and surroundings do a great deal.

Recent investigators differ as to the nerve supply. Some writers claim that section of the vagus inhibits the secretions of the stomach, others, that it does not. As to eructation, there are cases where the muscular movement becomes a habit; the patients do not always swallow the air. Abdominal massage acts by increasing the peristalsis of the stomach and intestines, thus increasing the tone of the visceral organs. Many of us fly to the stomach tube for assistance, but in neurasthenic patients there is great danger of producing gastrectasis. The stomach is liable to be atonic and unless you remove all of the fluid you will have a bad result. As for Dr. Grindon's interesting historical reference, I think we may cast a little doubt on the observations of those people. Cases in later years, thought to be those of rumination, were in reality nothing but eructation.

CRIMINAL ABORTION: A PREVAILING EVIL AGAINST THE UNBORN GENERATION: A NATIONAL CRIME COMMITTED FOR MERE SOCIAL PROMOTION.*

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The title with which I have announced my text, is one which bears with it such weight, such dimensions and such magnitude of human depravity, as to almost cause thinking men to become awe stricken in studying this the greatest evil found in the annals of human events. No act of a human race, either white or black, should be more profoundly denounced and universely condemned by the citizens of the world, than the one herein referred to. War with all its bloody conflicts creates no greater terror among the living, and inflicts no greater pain upon the dying, than the cruel hand of sinful man inflicts upon the helpless, irresponsible unborn creatures of our own flesh and blood, imprisoned in the mother's womb that subsequently becomes its premature tomb. A human being, immature as it may be, irresponsible for its creation as it is, placed in favorable conditions for development and future existence, now becomes a menace to progressive society, and is trodden beneath the heel of pride like a worm of the dust. Here the body of a heartless aristocratic woman ceases to be the earthly tabernacle for her own soul, but has been converted by love of society into a slaughter-house for her own dependent young. If these tortured beings had the power to cry out in agonizing response to the murderous assault waged upon them, what a pitiful lamentation, what a doleful sound would emenate from the dying multitude of these little human beings to greet the ears of murderous mothers and criminal doctors who are accessaries to the crime. Both doctor and mother are equally guilty, both are criminals in the eyes of the law, and from a moral standpoint, a more dastardly deed could not be committed by a civilized people than this inhuman act of blighting and hindering the perpetuity of our species.

If mothers had full control of conception and gestation, it would be but the expiration of the present generation until the final extinction would come. The civilized portion of the globe would be depopulated by the follies of a people who would willingly sacrifice an entire nation merely for present social enjoyment and selfish motives. The woman that abhors the idea of becoming a mother is to be censured and not

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pitied, though poor fool as she is. Never to feel and to know the tender touch of a baby's finger; never to press a sweet curly-haired head to her breast; never to watch with ardent love, the gradual unfolding of this beautiful flower called a child; never to know the profound joy abiding in motherhood, is never to know and realize the supreme function of her being. She passes through life with her chief mission on earth unfulfilled. She becomes a monstrosity as it were, in womanly traits and makes neither a perfect wife nor an aimiable companion. If she refrains from bearing children by lawful husband, she will also shirk the common duties belonging to a true and devoted wife in the home. The tenderest memories of life are those which cluster around the name of mother. No more bitter sorrow can come to a normal woman then to be denied the boon of motherhood. Such women carry to their graves longing hearts for the great joy which has been denied them. Such unfortunate creatures as these, are to be pitied indeed. But how different with the generality of healthy women. I have seen married society ladies upon finding themselves pregnant, break down and weep as though they had committed an unpardonable sin and many have become desperate, threatening to end their own lives, and nay, I am sorry to say, some have purposely carried out their threats, while others have done so accidently in attempting to bring on an abortion. Was it to evade the pangs of childbirth that prompted them to contemplate such an act? Was it thoughts of having to care for the infant after birth that caused this rash deed? Or was it due to common excuses, poverty and physical inability to undergo the ordeal of child-bearing and child rearing? To all this I will venture the assertion, the mind was negative and did not hold the least of them as the prime factor in forming a basis for excuse for desiring to overthrow nature, but it was due to false modesty; it was the thought of being handicapped for a few months during pregnancy; it was hindrance to social pursuits; it was the thought of having to abandon many worldly pleasures for the care of her babe, that caused her to take it so seriously to heart. And in order to escape the dark, imaginary picture of motherhood, they take the life of their helpless child at the extreme risk of losing their own. Strange it is to my mind to observe the feeling the mother holds for her child before and after birth. Before birth, it is a matter of absolute indifference and she becomes incurious of its existence. But after birth, when she has heard its audible cry and has clasped its tender form to her bosom, then the Omnipotent hand only can tear it from her breast.

If human life is appreciable, if it is but worth the living at all then every child born into this fastidious age, should receive its own applause at least, to know that it has run the gauntlet of human society and is now ready for enlistment in the army of contemporaries which has successfully passed through the same defiles of perverted nature.

Every babe born should be a blossom of joy with the fragrance of happiness to the heart and home of every American citizen. It should be the chief blessing from the great Giver of all good gifts in reciprocation of the fulfillment of his divine plan of creation; but instead of all this the little ones ushered into the aristocratic homes of today, are thorns and thistles that prick the souls of society's sons and daughters who feel humiliated to bow at the command of the King of the universe in recognition of his law of creation. The majority of children can no longer thank the Creator for their existence, but should thank providence that they were the happy outcome of a grievous mistake made in matters pertaining to preventive measures.

Since the advent of so many preventive means, the birth rate has grown markedly small, so small that the President has become alarmed at the situation when he speaks of "race suicide" and talks of means by which to suppress the manufacturing of such apparatus as are now being used by thousands of women to prevent conception. If women must and will persistently refute natures efforts at reproduction, then it is far less criminal to use a harmless preventive than to resort to mechanical and criminal measures to bring about a premature expulsion of the embryo or fetus. In this instance no life is intentionally taken; no death of the mother subsequently follows, consequently the pitiless woman has less sin to account for at the day of judgment than if she had willfully taken the life of her helpless progeny as it lay incarcerated as it were, in the prison-house of her own womb.

A very disgusting state of affair exists in the prominent fact that poodle dogs and purring cats have robbed the child of its rightful place in the hearts of many society women. An ugly, pug-nosed cur has lavished upon it the affection that was intended, and should be given, an unborn generation. There are owners of flats in cities who refuse to rent to tenants with children but will welcome the poodle dog and tabby cat. What an extreme perversion of love and sympathy with the mothers of our nation, when a poodle or a pug, may occupy the place in the heart and in the home, the heritable rights of children of the land. The talking parrot has been adopted in many childless homes as a substitute to satisfy that feminine longing for something on which to lavish love. They will not allow it to be a child, so it must be a poodle, pug, pussy or a parrot.

The large cities, where pomp and power hold easy sway, where aristocracy reaches the pinnacle of fashion, may boast of their rapid increase of population, but did you ever stop to consider from whence this increase came. Not from wealth and pelf of the higher masses; not from the fuss and bluster of gay society; not from those who daily seek the parks, theatres, ball-rooms and pleasure resorts for life's artificial happiness. No. This mundane class have no time to give to rearing children; they look at child-bearing with an eye of reproof

and with an air of disgust. This increasing population comes from a well recognized source, from the humble working classes who have not shirked the duties we all owe to mankind, to our country and to our God. The poor are prone to follow the teachings of the Good Book in multiplying and replenishing the earth, not from choice alone perhaps, but from the want of means by which to purchase luxurious sin. The wealthy buy immunity at any cost, the poor must abide by the ultimate consequences of their poverty. The well-to-do shun the family ordinance of multiplying the race which necessarily shifts the task, if it be a task, to the less financially favored, who must bear the burden of his arrogant brother in perpetuating the human family. There is one great consolation that should fill the hearts of the humble poor beyond the bounds of ordinary measure, with love and admiration for their prolific families, and that is to know that in them and their progeny lie the latent forces that will govern the nation years hence. To them and theirs, the world looks and relies upon for all the achievements necessary to perpetuate the grand purposes of mankind.

A bulletin issued by the Census bureau, 1904, prepared by Prof. Walter F. Wilcox, of Cornell University, shows a persistent decline of birth rate in the United States since 1860. Between 1850 and 1860, the proportion of children to women between 15 and 49 years, the child-bearing age, increased, but since 1860 it has decreased constantly. In 1860 the number of children under 5 years old to 1,000 women, 15 to 49 years of age, was 634; in 1900 it was only 474. The proportion of children to potential mothers in 1900 was only three-fourths as large as in 1860.

Considered sectionally it is found that in the North and West there has been a more or less regular decline, while in the South the change has been less regular and the decline less marked. In 1850 the proportion of children to 1,000 women in the North and West was five-sixths of what it was in the South; in 1900 it was less than three-fourths. In 1900 the smallest proportion of children was in the District of Columbia, where the number of children under 5 years was hardly more than one-fourth the number of women of child-bearing age. The next smallest proportion was in Massachusetts, where it was slightly more than one-third. The largest proportion was in North Dakota and Indian Territory, in each of which it was two-thirds. In 1900, for the United States as a whole, the proportion of children was only two-thirds as great in cities as in the country districts. In North Atlantic district, however, it was almost as great in the cities as in the country. In the Southern divisions it is hardly more than half as large in the cities as in the country, while in the Far West the difference is intermediate in amount. "This," it is explained, "is probably due in large measure to the fact that the immigrant population, which has

been swarming into the Northern cities of recent years, especially into the cities of the North Atlantic States, has been multiplying by numerous births with much rapidity, while the corresponding class, which has emigrated to Southern cities from surrounding country districts, has not been thus increasing."

A comparison is made between the proportion of children born of native mothers to 1,000 native women of child-bearing age and the proportion of children born to foreign-born mothers to 1,000 foreign born women of child-bearing age. In 1900 the former proportion was 462, the latter 710, the difference indicating the greater fecundity of foreign-born women, so thought by Professor Wilcox. I cannot agree that this larger per cent. of children born to foreign mothers is due to the greater fecundity, for I truly believe it due to the fact that they are not experts at preventing conception and must allow nature to supervene.

Through the professional courtesy of Dr. J. L. Andrews, of Memphis, Tenn., I am permitted to use statistics and quotations from a very able article written and read by him before a medical society in the state of Tennessee, along this same line. I shall only endeavor to give statistics from research and those gathered by him personally from doctors in his vicinity. This report shows the present status of affairs in that locality, and what is true of Tennessee, is also true of other cities and other localities. This report comes from twenty-four men well representing the average practitioner of medicine. The report was also confined to the months of January, February and March, 1904. "These twenty-four physicians have reported 174 pregnancies, of which 105 went to term, and 69 aborted, or 60.34 per cent. went to term and 39.66 per cent. aborted. In 69 interruptions, eighteen, or 26.08 per cent., were admitted criminal, twelve, or 17.39 per cent., were suspected criminal, twenty-eight, or 33 per cent., were said to be accidental (and not criminal), three, or 4.30 per cent., cause not known to the reporter, five, or 7.24 per cent., cause not stated by reporter, two, or 2.89 per cent., were done legitimately in the interest of the mother, 6, or 8.98 per cent., were beyond four months. In eighteen admitted criminal abortions, 13, or 72.22 per cent., were produced by instruments; five, or 27.72 per cent., were produced by drugs. In three of the admitted criminal cases, the name of the abortionist was stated to the physician and in one case, the amount paid the abortionist as mentioned—ten dollars."

What think you gentlemen, of a physician who will sell his soul and furnish his patient with a passport to the warm regions besides, all for the pitiful sum of ten dollars! Talk about the profession of medicine drifting into commercialism and no longer maintaining the high rank in public estimation it once occupied! Is not such nefarious conduct as that sufficient to kill the morals and to lower the dignity of

this grand and stately profession that has been and is to-day, represented by some of the best men the world has ever produced? It is useless for me to eulogize the profession in its legitimate standing as you know its value, therefore I will allow you to draw the contrast between this and the commercial degradation of the profession as herein described.

The statistics above given were gathered by 24 physicians from three months' work, and in averaging up for the full year's labor of these 24 physicians, we find in total, 420 pregnancies and 276 abortions. In even numbers, giving the negative the benefit of fractions, we would have 17 pregnancies and 11 abortions to each physician for the whole year. In the state of Missouri there are about 6000 physicians and if each physician in the state should have his proportion of obstetrical work, there would be in aggregate numbers, 102,000 pregnancies and 66,000 abortions. This is a rough estimate of the number of abortions each year, for there are many miscarriages that do not come to the notice of a physician; but it is comparatively accurate and serves to show the great army of human beings sacrificed each year merely for social promotions and personal gratifications.

"So far as I know," quoting Dr. Andrews, "these figures represent the only statistics in medical literature, based upon cases in private practice, certainly in recent years. The results are most startling, and yet, I dare say, not surprising to the general practitioner in city life. It is appalling to think that of sixty-nine abortions, eighteen were admitted criminal, and twelve more were strongly suspected criminal; or in all, thirty cases, or nearly 50 per cent., were either admitted or suspected criminal. And of the remaining thirty-nine, in eight cases the cause was unknown to the reporter."

Chicago should not be classed with greater distinction than any other large city as the chief city of sin, for all that can be said of Chicago can well be applied to any city. "Dr. C. S. Bacon, of Chicago, after a careful consideration of the subject, says that from six to ten thousand abortions are induced every year in that city. Dr. R. W. Holmes, of Chicago, says that where one abortion occurs from the various pathological causes, many more are produced by the professional abortionist, instruments, drugs and other measures." This state of facts is indeed deplorable to the extreme and if this procedure continues with the same increasing rapidity in the future as in the past, it will not be long until Uncle Sam will have to offer large premiums for new born babies in order to keep up the nation.

The non-sterile woman who becomes the wife and queen of the household, does not perform her whole duty, does not discharge her sacred mission in full on earth does she not bear children, everything being equal. The good wives in the country, upon the farm, whose hearts pulsate strongly in unison with the throbbing impulses of lov-

ing nature, have no time to flit away at balls and theatres, and God blesses their prolific propensities in furnishing them with large and happy families to swell the population of this great nation.

A popular belief is current among society ladies, however, that the very ignorant and slothful have large families and to do likewise, would be to lower their dignity to an equal degree. Parents of many children, in some instances, are actually ridiculed and sometimes censured for their fructiferous inclination. But the day of penitence comes to all who so foolishly waste their reproductive age; but comes, alas, when it is mournfully too late. It comes when the power of reproduction has become exhausted after having spent its force in an untimely way. When the female is no longer thus capable of reproducing her kind, then it is she reaps the seeds of her folly and thinks evilly of the past days and conditions that led to her present predicament. If it were so that the fair sex retained her power of reproduction throughout her physical life, then she might, after reaching her stagnant stage in society circles, atone for the past by settling down to the duties of wife and mother, enjoying at least, a taste of the joys of motherhood, receiving a crown of honor along with her good sisters who have done likewise.

How unwisely live some wives of to-day. Free from the cares of children in early life, is to be free from their bestowed love in after years. When the hair silvers with the frost of many winters; when the once beautiful form has grown stooped and tottering under ages of accumulated burden, how sweet to the soul would be the sound of cheering voices coming from a group of happy children: To live and die alone in a childless home, is to shut out from the longing soul the advancing sunrays from a heaven of peace, and to die a death most pitiful indeed. No one can do more for poor old mother in sickness and distress, than the hands of loving children. Who can best smooth out the wrinkles from her dying pillow? A kind son or an affectionate daughter. No one at death can lay her away more tenderly than her own dear children.

The healthiest and happiest women to-day are mothers who have borne many children. Those of us who have mothers under 70 living, know that many of them are physically stronger than the average young society lady of to-day. Bearing children in a normal way, never shortened the life of any woman, but instead, added years to her longevity. The old negro mammies who have reached one hundred years or more, are mothers of large families. No, it favors longevity to bear children and I believe we are much to blame in not teaching them this important fact and firmly impressing upon them the necessity of this healthful feature of married life. If doctors would set out to establish a new system of living, discouraging and denouncing all tendencies toward refutation of race progress, flatly refusing to

advise in any manner at any price, except in a legitimate manner, I believe it would lend very materially toward checking this sinful practice of aborting and the too frequent crime of infanticide. So in the name of civilization, let us save this martyred nation by teaching women to love children; kindle and rekindle the spark of love of offspring that has ceased to burn in their hearts, that they may be made to realize that for the sake of God and man, they have a more noble function to perform in this earthly career than merely to live for self alone. Upon her devolves the great duty of national motherhood and to shirk and to shun this sublime duty is to violate the moral law and the law of God and His creation. Let every physician become a missionary of mercy in the field of his labor, teaching and exhorting the public against this national crime and ere long, I trust that the souls of husbands and wives will become inspired with that exalted principle necessary to perpetuate God's favored creatures from now to the end of the world.

DISCUSSION.

Dr. C. H. Chastain, Weston: This paper serves to impress upon our minds that a crime is being committed in our communities and those committing this crime are using their diplomas to shield themselves. One of the chief questions to be considered is, how are we to convince the mothers who are guilty that this is a crime? They do not look upon this as a crime and they apply to physicians for an abortion as freely as for a prescription. Until you can get the mothers to understand that they are committing a crime, and until the profession understands that it is a crime that will not go unpunished, it will continue.

Dr. W. S. Thompson, Armstrong: I endorse every word of Dr. Lockwood's paper. He has not exaggerated the enormity of the practice of abortion in the least. Everyone knows how hard it is to enforce the law against the professional abortionist, for it is difficult to secure evidence. The individual having an abortion produced is as guilty as the abortionist and the law is such that if she gives evidence against the abortionist she incriminates herself. Recognizing this the state board of health has instituted a crusade against abortionists. The board has no authority to proceed against individuals who have an abortion produced but it has authority to revoke the license of criminal abortionists; not having authority against the individuals, the board can promise immunity to these individuals if they will give evidence. Hence such individuals will be less reluctant to testify. The licenses of several abortionists have been revoked and I would like to see all reputable physicians come to the assistance of the board in this matter. Many women who have abortions produced know that after the abortion has occurred, if they send for the abortionist they will be suspected, hence they send for a reputable physi-

cian. If you will make some little effort to secure evidence that will lead to the revocation of the license of these abortionists some of them can be disposed of very easily. The law is strong enough to stop it, but it is very hard to convict individuals by legal process.

Dr. J. Pitman, Kirkwood: I agree with the essayist in most of his points. But we men are a peculiar portion of the human family. Since the days of Adam, we have imagined that we had a scapegoat for our misfortunes. I did not hear the essayist throw part of the blame where it belongs. Two criminal classes were mentioned, the mothers and the abortionists. All this blame should not be thrown on the mothers. Are we willing to throw all the blame on the women? The men are to blame as much as the women. There is no law under heaven that will control abortion. We cannot by legalized enactments control it. We must go down into our hearts and admit that we men are to blame. A mother surrounded by a large family of children, working twelve to sixteen hours a day, with a limited purse to supply the wants of her family, deserves sympathy as well as blame and I repeat that the men are as much to blame as the women. I stand here today to defend the women, not that they are guiltless, but that the men are equally guilty, and the women are not more to blame than their husbands. Not one abortion in a thousand is done without the consent and approbation of the husband. Let us blame him some and not throw it all on the women.

Dr. J. T. Anderson, Cornelia: Not all aristocratic homes are childless through preventive measures. A goodly portion of sterility is due to gonorrhoea contracted by the cultured young man. This has caused more pain and more ovariotomies than all other causes combined, and it is the cause of more abortions than any other cause, not excluding criminal abortion. Teach the young man that the world does not revolve around his sexual organs and there will be less need for such papers as this.

Dr. Joseph Grindon, St. Louis: We are all agreed as to the estimation in which we hold these miserable creatures masquerading under the name of physician and I don't believe it is necessary before this audience to engage in heaping maledictions upon heads already sunk so low. But I ask, what has been offered in the way of a remedy? We have heard something of what may be done in the way of legislation and of the difficulties to be encountered. It seems to me that there are certain remedies to be applied and it is the duty of every one of us to do his part. This question comes to all of us as physicians and as men. I hold that our highest honor in the term *doctor* consists in this, that a doctor is not only one who heals disease, but is a *teacher* as well, and that upon us lies the responsibility of teaching the community even more perhaps than upon those whose profession it is to teach morality. One thing we can do is to educate the women.

There is a widespread idea among them that there is no life in the ovum until after quickening. We should impress upon them that abortion intentionally produced is murder, no matter how early it is done. Murder is a very ugly word, but that is an additional reason why we should use that word and let them understand just what it means. Second, we may in some way shame the preachers into doing at least a part of their duty, which very few of them do. There is one church, the Catholic, among the members of which this crime in question is rarely committed. This is due to open instructions through sermons, instructions and parochial visits, without any mincing of words and to the confessional. I have heard more than one Protestant preacher of the gospel admit that he did not touch upon that subject because "it would not do." The third point is, who are we to get after? If there is anybody we should get after and shame, it should be the most powerful, those in the highest places. I believe those in the profession guilty of these things are already condemned, but there exist our great newspapers, such as the St. Louis Republic, the Globe-Democrat and the Post-Dispatch, that publish advertisements of abortionists male and female, and of various pills, medicines, "regulators," etc. No woman is so ignorant but knows what these advertisements are meant to convey. These things are done by papers, which pose as great educators of the public, for the sake of the miserable, dirty dollars they can rake up from the foul floor of the slaughter-house of the innocents.

Dr. W. R. Patterson, Tipton: I wish to compliment the gentlemen who have laid the burden of responsibility where it belongs. The extent of this practice cannot be calculated and the immoral influence is beyond reckoning. What are we, the members of the medical profession, going to do about it? We should today resolve that our influence as teachers shall go out against this crime and that our influence with the legislative bodies shall be for the enactment of laws that will have a tendency to check this crime. Much can be accomplished by the unanimous co-operation of the medical profession.

Dr. A. H. Vandivert, Bethany: The points are well taken but one point has been overlooked and that is the responsibility of the family to bring the young people to understand more of the laws of physiology so that when they go out from their homes they will go with a better understanding of these matters. In the family circle education in regard to these matters should commence. If the young people are given a high standard of moral responsibility before they find themselves in a position to assume such responsibilities, they will be less liable to commit such crimes.

Dr. A. L. Gray, St. Joseph: The responsibility has been thrown upon the man, the woman and the abortionist, but a good many of our every day practitioners are to a degree responsible. A woman comes

into our office and tells us that she has passed over a day or two and that she wants us to dilate the uterus and put in a little gauze, and a good many of our practitioners do this. Now, if it is only one day or two days these young practitioners should understand that it is a crime. A special oath should be required of the young man starting into practice that he will not commit this crime.

Dr. A. C. Reynolds, Martinsville: It has been assumed that the people in the rural districts are less frequently guilty of this crime and the greater part of the blame has been laid upon society women. I live in one of the rural districts and know several families who have been married six to ten years with but two or three children. The abortionists practice through the mails. In nearly every city in the United States there are houses advertising these things and by sending them through the mails they permeate every home in the rural districts. I know one woman in our country who can produce an abortion as well as any man in this house, she asks the help of no mortal man. She can do it herself. All she has to do is to send to a house in Chicago.

Dr. Lockwood, in closing: I feel very much complimented by the interest manifested in my paper and I assure you I have enjoyed the discussion with great satisfaction. This subject has stirred the minds and feelings of the profession and the laity as well, with compassion for the many helpless lives that constitute a surprising portion of an unborn generation.

Woman is superior to man in so many walks of life that we, as the opposite sex are not much inclined to attack her in matters pertaining to social and moral government, therefore we cast the first stone of accusation with some hesitancy and to do this, we must turn from the glare and glamour of gay society and face the imaginary bewailing cry of the death-tortured unborn babe who would have been born as you were born and would have lived as you have lived had not the tide of society swept away the barriers and fortifications of nature's wise plan of reproduction.

Imagine if you can an abortionist extracting from the womb an embryo, or foetus and as it lies quivering in his palm, with a fiendish laugh, presents it to the anxious gaze of the perverted mother for inspection and for absolute proof of his criminal work. How revolting is all this to contemplate, and yet it is being done every day right in our midst.

I could not close this discussion without a word of praise for the good mothers who have complied with all the natural functions and phases pertaining to perpetuity of mankind, and I would apologize to those so unfortunate, that from disease or other causes, are unable to fulfill the office of maternity; they are to be pitied and not censured. I have no reference to the true and noble mothers of our grand

nation whose lives are made the sweeter by having enjoyed the distinction of motherhood. It is the aristocratic class, whose homes are childless and as chill and cheerless as a country graveyard in midwinter, that have furnished so much material for discussion here today.

THE BEST TIME TO GIVE QUININE.*

BY R. L. JOHNSON, M. D., ROLLA, MO.

In selecting a subject for your consideration, I did not wish to take one that has been presented very often, nor did I wish to report some novel or unique case, which might never occur in ordinary practice. In looking over the papers that have been read before this society in the last few years, I do not find more than two or three that discuss malarial diseases and their treatment. Aitken says: "The more frequently a disease occurs, the more necessary it is that its phenomena should be carefully investigated." Certainly few diseases are more frequent than those that we comprehend under the general term of malarial, and no remedy more firmly established in their treatment than quinine and the other products of cinchona bark. It may seem therefore to demand an apology for attempting to awaken a discussion, or for saying anything on this subject. I find, however, from an intimate acquaintance with many physicians and quite extensive reading of recent publications, that there are still many, and perhaps most physicians who do not fully adopt the method which I propose to advocate.

The legitimate bases for a course of practice are experience, precedent and reason. I lay down a proposition that the best time to give quinine in malarial disease, is *immediately on the commencement of the sweating stage*, to promote its *immediate absorption* and its *prompt elimination.*

Of the three foundations for a practice, I name experience first. I will not dwell on my personal experience; everyone must gain his own. It will not be improper, however, to mention here, where I am a stranger to so many, that fifteen out of the forty-three years of my professional life, were spent in active practice in the Sea Island and rice country of South Carolina and in a Louisiana swamp, 70 miles wide, where I have repeatedly treated all the malarial diseases endemic in those localities, probably representing all the forms known in the United States.

When I began my career in that line of work, an economic question presented itself to me; one which regarded my time, my patient's time and suffering, and my pocket. Two methods of giving quinine offered themselves for adoption. The conservative method, then gen-

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erally recommended, to give it in broken doses during the apyrexia, being careful to have the patient well under the influence *on the approach of the next paroxysm.* The other, advocated by a more decided and radical class, that of giving it in large antipyretic doses during the paroxysm. The latter was comparatively new and thought by many to be dangerous. Now just at this period, in 1868, with hundreds under my care, when quinine, from high tariff and monopoly, was costing me $5.00 an ounce and I was furnishing the quinine, I was called to see a robust man, 25 years of age suffering with a sharp attack of bilious remittent fever. It was noon of the second day. I prescribed a number of doses of quinine to be taken during the remission until the fever rose again. At noon of the next day, I found him worse, with all the symptoms that characterize that class of disease in that climate. High fever, headache, dry tongue and skin and scanty urine. In searching around I found all of the quinine put away, not in my patient, but on the shelf. I promptly poured the contents of all the papers (about 25 grains) into one paper and then down my patient's throat, and left him. This was practically giving it all at the commencement of the sweating stage, as the fever had fallen at one o'clock of the previous day. The next day when I called at noon, I found him nearly well. He told me he felt no inconvenience, but that he had never sweated so in all his life. The question immediately arose with me, why not give all or nearly all of the quinine at the beginning of the sweating stage. From then until now I have found no reason why I should not but many why I should. In 1881, before I knew of Laveran's discoveries, identifying certain micro-organisms as the cause of malaria, I read a paper before the Rolla District Medical Society on the subject of malarial diseases from which I quote as follows:

"Without entering into any discussion as to whether malarial fevers, pains and other remittent and intermittent symptoms were the result of derangement of the nervous system, or of diseased conditions of the viscera or the blood, I will assume that the last be adopted as the truth and that it is conceded that the disease consists essentially in a change of the blood. There are a great many and to my mind conclusive arguments in favor of the last assumption. Some indicating the existence of chemical changes, some the presence of foreign substances or the absence of the normal constituents, others seeming to show the presence of living organisms, either animal or vegetable. Without attempting to examine the arguments for these various opinions at this time, I will state at once that I adopt and act upon the belief that the blood contains a foreign element; second that it is desirable to neutralize or destroy this element; and third, that it is necessary to eliminate it and its products from the body. It is plain that if we assume, that the malarial element consists of a material, a substance however intangible

we must make provision not only for its destruction, but for its elimination. For if it is a chemical body the administration of a drug to be absorbed into the circulation, designed to act upon that body, will imply the formation of another body. In other words we know that annihilation does not take place, but a third body is produced; and if the malarial body consists of a vegetable or animal organism which we assume to be killed by the quinine, we must also assume that the blood will remain contaminated by the presence of this defunct vegetable or animal matter. Any one reading the literature of this subject will perceive how little is said of the prompt elimination of the supposed micro-organism, or of the quinine which is a foreign substance, or of the products which are the result of the meeting of the other two.

"Without going into this very interesting subject we will recall the well known and indisputable fact that the free diaphoresis is the natural and most desirable termination of a malarial paroxysm. Let us imagine the case of malarial fever, remittent, quotidian, tertian, double tertian, quartan or any other variety, open or masked. Now whether the chill is a well marked cold chill, a dumb chill or one of the varieties of masked chill, we find the process of digestion interrupted; food taken into the stomach a short time before, not being digested, soon beginning to undergo fermentation and, if not vomited before that process has advanced, coming up intensely sour, or being retained until the fever rises, causing severe headaches and sometimes, especially in children, convulsions. Now it is useless to give quinine at this time, for even if it is not vomited, little of it will be absorbed, and that little will produce unpleasant cinchonism (which takes place only to a limited extent under the method which I advocate) so that we fail to get either the curative or the sedative effect of a large dose. During the paroxysm, the water which the patient calls for, and which I let him have freely, is generally thrown up, having, however, produced the good effect of cooling and washing out the stomach. We recognize at this period the increased heat of the stomach and other viscera, anorexia, continued vomiting of the water as fast as it gets warm in the stomach (and I will remark here, that this kind of vomiting of large draughts of cool water is a relief: that it cools the stomach, reduces temperature and is easily accomplished if the supply of water is free and not too cold), the suspension of all the secretions, the urine being scant and high colored, the skin, the tongue, the eyes, the lining membrane of the nose, all being dry and parched. Purgatives do not act. The bowels are dry, the patients have headache and are often delirious. The same blood goes coursing around and around through the vessels, or owing to its deteriorated condition and lack of reciprocal action between it and the capillaries, becomes blocked either in the periphery or in the central organs; stasis taking place

and showing us those conditions so injurious and so often fatal which we call congestion. Often when the circulation is almost stopped, when the changes in the capillaries have almost ceased to take place, the heart beats with effort and increased frequency until as death approaches the force dies out; while often the frequency is increased, ending in mere fluttering, long after the radial pulse has ceased to beat. The increased action of the heart during the fever, does not imply natural tissue waste and repair, but rather, an effort to overcome an impediment. At this stage of the fever, we find great difficulty in securing the retention and the absorption of quinine and the elimination of it and the defunct plasmodia.

"We may now at the crisis, if the case is urgent, especially if we know the type, anticipate the decline by the hypodermic administration of the quinine or by the hypodermic use of a good dose of morphia, followed in 15 or 20 minutes by a large dose of quinine by the mouth; but as a rule the fever should be tided over with the help of various well known means which will reduce the suffering of the patient. Among others cold affusion to the head and to the *interior* of the stomach only and warm baths or packs to the lower limbs. Experience and the reasons advanced corroborate each other in making it improper to use general cold affusion, or to allow the patient to lie in a draft, when we are all-desirous of securing free diaphoresis—this very important means of elimination. It is the means adopted by nature or rather it is the natural phenomenon which follows the fever; and reason and experience teach, that instead of checking, we should promote it; and immediately upon its establishment, when all the other functions are resuming their sway, when the mouth becomes moist and the stomach retentive of fool, we should give 15 to 20 grains of quinine at one dose; then a slice of toast, or two crackers and a cup of coffee, or other light nourishment but *not* milk. Twice as much quinine may be given with impunity and often with benefit, but experience shows that amount to be generally enough. This dose may be repeated in a few hours and the patient kept covered up and asleep. A liberal supply of water or other fluid, should be furnished to supply the waste by the skin and kidneys which is generally enormous during this period. The water is not thrown up and is promptly absorbed, promoting the sweating which often saturates the bedding, often staining it some, and sometimes causing an odor. When the process is continued for some hours, the patient should be rubbed dry. The exhibition of quinine should be stopped several hours before the next paroxysm. The same treatment must be pursued during and after the next paroxysm, and if another paroxysm does not occur the same treatment must nevertheless be pursued at the *same hours* the *next* day, as if it had occurred, and in reduced doses for two or three days and then in doses of six grains at bed time and three at breakfast time for a week

longer. This general rule is applicable with such variations and with such auxilliary treatment as will suggest itself to an intelligent practitioner, to all forms of malarial disease, intermittent of all kinds, bilious remittent, all complications of malaria with pneumonia, typhoid fever, etc. In fact continued experience convinces me of the advantage of administering quinine in large doses at the commencement of the sweating stage."

The above was written twenty-five years ago and it was with great pleasure some years after that I read the following summary of the results of Baccilli's experiments to find out the best time to administer quinine. He says "quinine even in doses of one gramme (intravenous injection) is not capable of cutting short a febrile paroxysm when given in the beginning or even three hours before * * * * *Given at the decline or at the end of the paroxysm it either prevents the next or essentially reduces its intensity."

Now let us take a very cursory glance for we cannot enter upon a study of the recent discovery of Laveran and his followers, and we will find clearly that malarial diseases proper are caused by a protozoon called plasmodium malariae, an animal micro-organism; that this animalcule invades the blood corpuscle, increasing within it until it reaches its full development, destroying the corpuscle; that the parasite contains a nucleus with nucleoli; that at the time of sporillation the nucleus divides; that segmentation is coincident with the paroxysm; that immediately following the paroxysm fresh hyaline bodies appear in the red corpuscles.

I merely wish here to suggest that the reasons for this practice, based upon assumption and analogies, may now be based upon the latest discovery which we can demonstrate by the microscope. At what period would we expect to get more quinine into the blood with least inconvenience to the nervous system of the patient than at the beginning of the sweating stage? When would we expect quinine to have the most destructive effect upon the parasite than when segmentation or sporillation is taking place when the corpuscles have broken? When can we expect more rapid elimination of the products of this destructive action than during the sweating stage, when all experience shows that all of the excretive and other functions are fully re-establishing themselves?

In conclusion let those of us who reason from clinical observation, remember that experience shows anemia, hypertrophy of the spleen and heart, diseases of the liver and kidneys, malarial hematuria, and many other evils, to be the direct or indirect results of prolonged or badly treated malarial fever: and let those of us who "have to be shown" remember that under the microscope this destructive hemocytolysis can be seen taking place with each successive brood of parasites.

Then let us not hesitate at the first assault to make a counter attack and save every precious corpuscle that we can.

Then with the change of a word, we can adopt for our motto a line from Seneca, who in writing about a very different malady, said "Quisquis in primo obstitit repulitque plasmodium malariae, tutus ac victor fuit."

DISCUSSION.

Dr. C. A. Mitchell, Blythedale:—In the rigor of malaria there is capillary congestion; quinine relieves the engorgement. With the heart at this stage trying to drive the blood on and probably already weakened, if we are not careful, we are likely to cause the very thing we are afraid of. But I endorse the doctor's statement that the time to give quinine is when the moisture is beginning, after relaxation has taken place. Then we can get results. Giving such large doses may do for the old practitioner who knows well the history of his patients and being certain that they have a strong heart, but unless we have such a history we must be careful how we give such large doses or we may cause a paralysis of the heart.

Dr. Johnson, in closing: I am sorry not to have heard the *subject* of my paper "The Best Time to Give Quinine," discussed.

I had hoped to have my clinical experience corroborated, and I am disappointed that none of the students of pathology and physiology noticed the points, either favorably or adversely, on which I desired information, namely, the prompt elimination of quinine and also of ptomains and leucomains. I have tried to find to what extent the quinine is eliminated by the skin. I know that the greater part is thrown off by the kidneys. It seems reasonable to sweat patients and I have known numbers of cases almost cured by sweating.

I notice a criticism of my large (?) doses. I consider fifteen grains of quinine a very moderate little dose provided prompt elimination by bowels, kidneys and skin is secured. I would rather take fifteen grains at one dose than three grains three times a day. I once took, at one dose, half a handful of a mixture of the heavy sulphate of cinchona and sulphate of quinine. I suffered greatly—had a "Doctor" with me for hours at my wife's request. Next day I rode eighteen miles horseback in a hot sun and never suffered any special inconvenience and never had another chill for eight months.

In the prompt absorption and prompt elimination lie success in the use of quinine.

SUPPURATION OF MAXILLARY SINUS WITH INVOLVEMENT OF ETHMOIDAL CELLS AND SPHENOIDAL SINUSES.*

BY H. J. JURGENS, M. D., EDINA, MO.

The increase in the last decade of diseases of the nasal accessory sinuses is sufficient excuse for the report of this case. I think that in its etiology, mode of extension and amount of tissue involved, my case is analogous to the majority of cases of nasal disease. As in all other ailments to which the human body is heir neglected prophylaxis, either on the physician's or the patient's part or both is the great error to be corrected. The patient by his procrastinating tendencies is usually the chief offender. The physician by his desire to please and lack of back bone the accessory. In this case the physician in charge had to contend, not only with the patient's whims but also with the deleterious influences of medieval folk lore and legend upon officious neighbors, who ever insist upon the maxim "do not have a tooth pulled while in a pregnant condition." Mrs. B., Aetas 24, mother of two months' old baby had been suffering since her second month's pregnancy from the effects of a carious molar tooth. Her physician advised her to have it pulled. After consultation with the neighbors his advice was rejected, on account of her delicate condition. She soon developed symptoms of antral empyema which caused her so much pain that she resolved to follow her physician's advice to have the tooth removed. Dr. E. S. Brown proceeded to comply with her request, and also treated the empyema for some time by washing the antrum through the alveola with permanganate solution which returned through the nostril, indicating that the ostium maxillare was patent. In spite of this thorough treatment the patient did not improve; on the contrary the right cheek swelled up to an enormous extent whilst the orbital floor was raised so much as to cause prominent bulging of the eye ball. This condition of affairs continued until after her confinement when I was called in to see the case. At this time the pus had broken through the facial wall leaving an opening just below and internal to the infra-orbital foramen. I could easily introduce a probe through this sinus into the antrum. The pus contained much osseous detritis and debris giving it a gritty sensation when rubbed between the fingers. Examination of the nasal fossæ was entirely negative, the mucosa covering the corresponding meati appeared a little darker but from the middle or superior meatus proper there was no discharge. The patient could breathe readily through both sides and did not complain of any nasal

*Read at the annual meeting, Jefferson City, May, 1906.

trouble whatever with the exception of pain at the root of the nose, which I attributed to reflex irritation of the nasal nerve. Her general condition was good. She was not then or never had suffered with influenza, which together with the history of the case caused me to consider it as of dental origin. I determined therefore to make an opening through the canine fossa to curette the antrum and clean it out thoroughly. Consent to this procedure was reluctantly given. A trap-door opening was made into the canine fossa, and besides removal of granulations a small cannula was inserted through the upper sinus through which the pus had broken, in order to allow thorough washing out. The lower opening was packed with sterile gauze and changed each day. This treatment was continued for two months without any perceptible improvement. On the contrary the process seemed to be retrogressive. The corresponding turbinates commenced to show congestion and soon necrosis set in with its accompaning symptoms, of which pain stood out in bold relief. She soon was unable to breathe through the right nostril, and also her sense of smell gradually diminished until finally it disappeared entirely. The case went from bad to worse. The entire right nasal fossa filled with a mass of caseous material of exceedingly foul odor. To still further complicate the case she commenced to complain of difficulty in swallowing. Examination of the throat revealed a rounded indurated spot about three quarters of an inch in diameter upon the vault of the pharynx. Thinking that I might have to deal with a sphenoiditis I attempted to examine the fissure leading to the superior meatus but this together with all other land marks had completely disappeared. Her general condition though good until now began to show the effects of sepsis. The temperature continually changed from 97° to 102° and 103° accompanied by chilly sensations; pulse gradually diminished in volume and increased its rate, running up to 110. Light was painful; she had violent pains in brow and eyes, muscles of scalp and neck. Hearing diminished and melancholia made its appearance. In view of such symptoms foreboding no good I refused to continue with the case unless treatment was left entirely to my own judgment, to which consent was reluctantly given. The condition of affairs to me seemed to be very bad. From all appearances I judged that most of the facial wall of the antrum was destroyed, that the ethmoidal cells, both anterior and posterior, were converted into a cheesy mass; that there was involvement of the sphenoid as evidenced by the indurated spot on the pharyngeal wall. The literature on the subject at my disposal, while giving accurate information as to the operative technique of each separate sinus did not cover the possibility of necrosis of the sphenoid,or perhaps of the basilar process of the occipital bone. It is true I found report of malignant diseases of sphenoid in complications with cerebral disease. I found reports of acute sphenoiditis and ethmoiditis, but of the chronic variety

nothing was to be found. I have since seen a resume of the work of European Rhinologists by Stuckey in which cases similar to mine and even worse are reported but at the time I had my case, namely in 1897, I could find nothing. Being thrown largely upon my own resources I decided to deal with the antrum first. An incision was made on the cheek, following the naso-labial fold for cosmetic after effects. The upper extremity of the incision terminated in the external opening of the old sinus internal to the infra-orbital foramen. The anterior bony wall of the antrum or rather what was left of it I removed with the chisel since it was all diseased. I curetted the entire interior of the antrum and broke away most of the nasal wall so as to allow free drainage through the nose. After thorough washing with peroxide I closed the external wound with silk. I now proceeded to determine the extent of posterior involvement by introducing a bullet probe in a direction upward and backward. I did not meet with any resistance until a point three and one-half inches from the anterior nasal spine was reached indicating that I was somewhere in the neighborhood of the basilar process of the occipital bone. I was surprised to note, however, that I could not deviate laterally, which to my pleasure indicated unilateral involvement. Recalling the proximity of the cavernous sinus to one side, the pons Varolii and basilar artery above, I was very much afraid to use any force whatever but finally mustered up enough courage to introduce a small blunt curette and by slow and careful backward and forward movement removed all the caseous material until nothing was left but solid bony walls. Of the ethmoid nothing was left on the right side but the perpendicular plate, which effectively had prevented the infection of the opposite side. After flushing the cavities with saline solution they were packed with sterile gauze. The stitches in the cheek were removed on the fifth day. There never was any recurrence of suppuration, in fact I discharged my patient two weeks after the operation cured. She reports within the last month that she has been entirely free of any trouble with that side, also that her sense of smell has returned.

While the diagnosis of this case offered no particular difficulty there are some points of interest which duly considered may be beneficial to us.

The Source of infection. All authorities agree that dental caries and influenza are the most potential factors in the production of sinusitis. Influenza could be easily excluded from this case since the history clearly pointed to the carious tooth as the etiological factor, though why the necrotic process extended on to the facial surface and not through the maxillary tuberosity on to the external wall, was and still is a mystery to me.

Ostium Maxillare. By several authorities it is claimed that antrum empyema can be treated through this opening. While it is true

that in this case fluids injected through the alveola returned through the nose it does not prove that the reverse can be done. It should be remembered that this opening lies in the middle meatus, therefore considerably above the floor of the antrum, and as a consequence a certain amount of fluid, even if it were possible to inject it through the ostium, must remain behind, while the overflow alone can pass out through that opening. To concede that even by experts such can be done as a routine would be absurd. Cryer[1] of Philadelphia, claims that it is impossible to pass a probe through the nose into the antrum since anyone can demonstrate upon the skull the fact that the ostium is directed from behind forward and outward.

Mode and extent of involvement. Observing the anatomical relations of the different sinuses we conclude that since the ethmoid and sphenoid aid to make up the roof of the nasal fossa, they must be on a higher level than the opening of the antrum. While it is true that with the head erect the inferior surface of the sphenoid is on a level with the maxillary sinus, nevertheless it must be borne in mind that the opening of the sphenoid is contracted by articulation with the sphenoidal turbinated bone, and that by a small rounded opening in the upper part of this little bone the sphenoidal sinus communicates with the posterior ethmoidal cells. If we then accept as a surgical principle the effect of drainage we must conclude that involvement of the sinuses, secondary to maxillary sinusitis, is either rare, or systemic influences do their share to bring about this condition. On the other hand, given a primary infection of the sphenoidal, ethmoidal or frontal sinuses, a secondary infection of the antrum could be produced very easily, especially if the direction of the ostium maxillare be remembered.

The unilateral character of the case. In this connection it must be remembered that at no time the left side gave any evidence of disease. The possibility of this in the ethmoid is readily seen, since here the two sides are separated by a strong plate of bone, "the perpendicular plate." In the sphenoid, however, while it is a fact that a septum exists, it is usually only rudimentary and, according to Gray, often contains several small foramina, by means of which the two sides communicate with each other. My patient must have had an abnormally strong sphenoidal septum to prevent infection of the other side. Since the infection seemed to extend upward I am rather surprised that the frontal sinus escaped, especially when it is remembered that the anterior ethmoidal cells are in direct communication. Only the great facility for drainage which nature has provided through the nasal fossa into the pharynx, or the anterior nares can explain the escape of this sinus, as well as the lack of cerebral and other involvements. When we consider the large number of foramina establishing communication between the nasal fossa and other cavities we are astonished to find so

small a number of cases complicated by subdural or even cerebral abscesses through the cribiform plate; infection of the orbital cavity through the nasal duct; abscess in the spheno-maxillary fossa through the spheno-palatine foramen; infection of the ear through the Eustachian tube, and other infections to the pharynx. That such complication do occur can not be gainsaid. Stuckey[2] reports a case of ethmoiditis complicated by cerebral involvements; Herbert Tilley[3] reports a case of ethmoiditis followed by subperiosteal abscess of frontal and parietal bones, sinus thrombosis and cerebral abscess. Stuckey[4] in his condensed resume, cites a large number of cases presenting involvement of adjacent cavities. The possibilities for mischief in connection with nasal accessory sinus disease are so great that it behooves us to extend our research in that direction.

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VALUE OF JAUNDICE AS A DIAGNOSTIC FACTOR IN DISEASE OF THE BILIARY PASSAGES.*

BY JAMES Q. CHAMBERS, M. D., KANSAS CITY.

One cannot, in the time allotted to this feature of our work this evening, review the question in a searching manner. At the same time the following brief outline suggests one viewpoint from which a fuller study of the subject may be approached.

Jaundice is that symptom in a variety of affections characterized by a deposition in the tissues of the body of pigment ingredients normally excreted in the bile, and manifesting itself beneath the skin and visible mucous membranes as a greenish yellow, and sometimes brownish, discoloration, of varying intensity. Biliary pigment matter is derived from the hemoglobin of red blood corpuscles. Hence, in those instances of rapid or extensive disintegration of red corpuscles, too great for the proper removal of the same by the liver, occuring in the advanced anemias of many grave diseases, a change of color is noted in the cutaneous surface, simulating true icterus to be presently described, and to which the name *Hematogenous Jaundice* has been applied. Reference is made to this spurious form not that it has any close relationship with disease of the biliary passages, but because at a cursory glance the condition frequently simulates true biliary stasis. A little care in the study of an individual case usually suffices to determine whether obstruction to the output of bile truly exists or whether the discoloration is due to excessive hemolysis. That confusion in

*Read before the Jackson County Medical Society, meeting of May 8, 1906

this regard is possible three recent cases in the writer's experience demonstrate. The one by reason of weakness, and yellowish waxy discoloration presented the aspect of a probable malignancy encroaching upon the biliary outlet; a microscopic analysis of the blood speedily showed the case as one of spleno-myelogenous leukemia. A second, the victim of severe epigastric and substernal pains, plus a yellowish tint of skin, was growing daily yellower under the drastic whip of chologogues. The case was one of angina pectoris incident to cardiac sclerosis, with the muddy pallor that accompanies a grave cardiac lesion. The third, an advanced case of interstitial nephritis with aortic and mitral regurgitation, has a color of manila straw. He might well be called jaundiced. Yet his urine is light in color and specific gravity; his stools are neither clay colored nor fermented; in fine, his liver is no more implicated than are his other digestive organs.

True jaundice, the jaundice of liver origin, of some defective output of bile, is termed hepatogenous. It seems expedient to view this under two separate divisions. The first variety we may denominate *Parenchymatous Hepatogenous Jaundice*, in which there is no obstruction in the gross bile ducts, no distal obstacle to the escape of the bile into the gut. Rather is there a suspended function of liver cells and biliary radicles; a cloudy swelling, a round cell infiltration, even an actual degeneration, due to sundry intoxications. The jaundice of malaria, yellow fever, acute yellow atrophy of liver, of acute infectious jaundice or Weil's disease, of Hanot's biliary cirrhosis, of arsenical and phosphorus poisoning, and possibly of abscess, pyemia and carcinoma is under this head. With the slowly developing agencies of this group the jaundice may be very slight, or even for a great while absent, owing to the merely partial suspension of hepatic parenchyma and owing to the highly probable compensatory and hypertrophic tendency of unaffected liver cells.

The second variety we shall consider as *Cholangic Hepatogenous Jaundice*. In this there is no grave perversion primarily of the corpuscular cycle, no appreciable interruption to the elaboration of bile, but an obstacle in the larger ducts to the outflow of the biliary product. It is within the confines of this territory that one must find the true value of jaundice in the diagnosis of bile duct troubles; but unless the observer has before him the panoramic view outlined in the previous headings he may easily interpret either the hematogenous or parenchymatous jaundice as instances of bile duct obstruction.

Naturally the possibility of a mixed jaundice may at times place the student in a hopeless dilemma from which he does not emerge until enlightened by operative or post-mortem evidence. For example, in carcinoma of the liver one may find the parenchyma pretty generally involved and productive of only slight icterus. Now add to this a catarrhal condition of the greater ducts that may ensue at any moment,

or perhaps a metastatic deposit in the lymph glands at the hilum encroaching upon the hepatic or common duct and immediately there is not only a parenchymatous jaundice but also an obstructive cholangic form to intensify and confuse the original picture. Again in grave malaria the rapid consumption of red corpuscles causes hematogenous pigmentation. To this is not uncommonly added parenchymatous interference plus even a catarrhal blocking of the large bile ducts—a jaundice then of triple origin falling in all three of our classifications.

However, this third or cholangic variety, due solely to bile duct affection, is essentially always in the nature of an obstruction, due to occlusion more or less complete of the biliary outlet. This blocking may be occasioned in countless ways. Briefly classified one has:

CLASS A. *Plugging of Duct.*

1. By swelling of mucosa and by thickened catarrhal products, ordinary catarrhal jaundice induced commonly by extension from a gastro-duodenitis, or coming as a concomitant inflammation to many of the common febrile infections e. g. influenza, typhoid, secondary syphilis, malaria, etc. Passive congestion in the failing stage of heart lesions lends to gastric, duodenal and biliary catarrh with the production of jaundice. Yet in the event of this when one considers the cyanotic damage progressing in the liver tissue, he is persuaded that parenchymatous jaundice may be playing a part. In passing we may in this connection refer to the trauma caused by the successful passage of a biliary calculus, leaving in its wake a transient catarrhal or more permanent cicatricial stenosis producing jaundice, while the true culprit has made its escape into the intestinal tract.

2. By tumors: Carcinomata, exanthemata, lipomata, etc., plugging the duct or its orifice, have been reported.

3. By foreign bodies, e. g., gallstones, cherry and plum stones, intestinal parasites, etc. In a general way the intensity of the discoloration is proportionate to the degree of the occlusion. Yet a lodged calculus by a valve like action may give rise to an intermittent jaundice, colicky attacks, chills, fever, and sweats, the so named "Charcot's intermittent," so highly diagnostic of stone in the common duct.

CLASS B. *Encroachment on the Calibre of the Ducts.*

1. By stenosis, which may be congenital and fatal in the first few days of life, or the stenosis may result from cicatricial changes. For example, the laceration of a passing stone, or an operative wound may result in stricture. Typhoid post-ulcerative narrowing is possible. Likewise peritoneal bands and adhesions of local peritonitis, where a perihepatitis, or peri-duodenitis exists, may cause occlusion.

Under this heading may also be considered that very interesting malady, chronic interstitial pancreatitis, obliterating the common

duct lumen, closely simulating malignant disease of the pylorus with jaundice, and yet as the surgeons will explain, quite amenable to operative relief.

2. By tumors or over-growths impinging on the ducts and closing lumen, e. g. tumors of liver, gall bladder, stomach, pylorus, pancreas, portal glands, pregnant or fibroid uterus, etc.

3. By such kinking or congestion of the lumen as may be induced by the dragging of attached mesenteric tumors, floating kidney, prolapsed stomach, and the like.

It will be noticed that these agents of interference working upon the gallbladder and cystic duct alone are not apt to produce jaundice. Indeed there is no anatomical reason why they should. So that the absence of jaundice in troubles of the bile duct system is a diagnostic point in favor of the gallbladder or cystic duct being the seat of involvement.

A word as to symptomatology. The sudden appearance of, or increment of discoloration reaching its height in a few days, the yellow sclerotics, the porter-colored urine, high in specific gravity, showing yellow froth on agitation, and responding to Gmelin's test for bile, the whitish, pasty coated tongue, the foul breath, the complete loss of taste and appetite, the nausea, the gray stools, foul and fermenting from absence of bile, the itching skin, the mental hebetude, the pulse of 60 or less, all point to a complete occlusion of the hepatic or common duct from whatever cause.

With this cursory, incomplete review of the subject one can see some of the limitations of jaundice as a pathognostic symptom of biliary duct involvement. The hematogenous factor must be set aside or accounted for, the parenchymatous element must be borne in mind and identified by the age, sex, occupation, case history, and collateral symptoms. Finally in the cholangic or obstructive cases neighboring organs and conditions must be carefully scrutinized lest they be the prime offenders to which the biliary stasis is merely secondary. With all these excluded there remains a group of cases, some diagnostically simple, some more complex, in which the occurrence of jaundice defines the malady with tolerable certainty to the gall duct system.

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EDITORIAL.

INFLUENCE OF COUNTY MEDICAL SOCIETIES.

That a medical society should represent the best interests of a medical community goes without saying, but the feasibility of the truism that a society composed exclusively of physicians and devoted to the prosecution of medical science, can have as its component parts men of diverse opinions on medicine and yet be of one opinion as to the feeling of fellowship, has been doubted. The keystone to the arch upon which rests the success of an organization is undoubtedly the feeling that directly a doctor is made a member of a society he has a fixed position, irrespective of prejudicial trivialities which other members may entertain towards him. Without this keystone the stability of a society is not unlike a house of cards—the slightest criticism wafted toward it will cause its downfall. A corporation should desire strength of body, growth in numbers, and earnestness of work.

Strength of body, meaning the health of a society, can be achieved only when unanimity prevails; growth in numbers when a society's attractiveness is such that many desire to join; and earnestness of work when trivial dissensions arising outside a society are not allowed to influence the attitude of any member towards the value and worth of another member's contributions to science. The times are not ripe for the realization of an ideal society, if they ever will be, and we only wish to point out some of the salient features which constitute success when a number of men are brought together in the interests of medicine. "In unity there is strength" is as applicable to us as it is to statehoods and legislatures. The strength of county societies will bear fruit in making our state association a power whose demands will not go unheeded.

As yet our state association suffers through the indifference of some county societies and reflects but feebly that oneness of thought

we desire. When the demand for righting a wrong is brought before our legislative bodies in such a way that no legislator can doubt its sincerity, since it is not the wish of one county but the wish of all, there will be no recourse to evasion but a hearty co-operation. Lack of enthusiasm on the part of a legislator whose support is absolutely necessary to rectify a defect, can be due only to his not receiving from the state association a clear, concise and unprejudiced presentation of the case in hand. This can only be done as was said above by the members forming the various bodies, uniting in a magnificent whole whose power shall dismay the enemy and convert the most indifferent legislator into an active agent whose smallest suggestion will carry weight.

DEDICATION OF ST. LOUIS MEDICAL SOCIETY BUILDING.

On September 15th, the St. Louis Medical Society formally dedicated its new home at 3523 Pine St. The widespread interest in the event was attested by the large attendance (nearly 200) of members and guests.

The meeting was called to order by President Homan who dwelt especially on the decline of personal animosities which in the past had done so much to retard the progress of scientific work in the Society and congratulated the members on the development of a more tolerant spirit incident to better mutual acquaintance. The first formal address was by a pioneer of the Society and ex-President, Dr. Le Grand Atwood who gave an historical sketch of the Society in its earlier years, interspersed with many amusing anecdotes of the fathers of the Society. Dr. Warren B. Outten spoke interestingly of the "St. Louis Medical Society of Today," and Dr. Wm. G. Moore prophesied its future. Alternating with the formal addresses came the reports of chairmen of committees directly concerned with the building and dedicatory program, Drs. Morfit, Kieffer, Funkhouser and French. The latter, as Chairman of the Committee on Business Affairs, made a special plea for contributions toward lifting the debt which still hung over the building. How effectively he performed this task may be judged from the fact that within a few minutes nearly $1,900 were pledged.

In the course of the evening it was announced that the set of portraits of the ex-presidents of the Society, hung on the north wall of the auditorium, had been generously donated by Dr. F. L. Henderson.

At the conclusion of the exercises Dr. Robert Barclay offered resolutions expressing the thanks of the Society to the members and committees especially concerned in the erection of the building.

The work of canvassing the state by counties is progressing very

favorably. Six men are in the field having been assigned to the following councilor districts: 1st, 8th, 10th, 15th, 16th, 18th and 19th.

We anticipate a splendid increase in the membership as a result of the work of these representatives. Not only an increase in numbers will follow but a wider, broader spirit of fellowship and a tolerance of individual views that shall make action on questions of importance so harmonious that no dissenting voice will be raised.

THE MEDICAL RECORD: AN ENEMY OF THE AMERICAN MEDICAL ASSOCIATION.

For many years the New York *Medical Record* was the leading medical weekly in America. Next to the *American Journal of the Medical Sciences*, it represented, better than any other journal, the best there was in American medicine. William Wood & Company, the owners, for nearly fifty years—practically since the present nominal head of the house, William H. S. Wood, in 1863 became a member of the firm—have conducted an exclusive medical book publishing business. The imprint of the firm has been on the title page of some of the best medical works this country has produced. This medical book and journal publishing business is presumed to have been and to be a paying one. The journal publishing part, especially the *Record*, undoubtedly has been a source of a comfortable annual revenue.

The patronage of William Wood & Company, as medical publishers, came from the better class of physicians—those who read and think. Their journals have been of such a character as also to appeal to the intelligent in our profession. Under such circumstances, one would naturally suppose that they would have realized that the movements inaugurated by the American Medical Association against the nostrum evil, and for a better condition in the profession, would be endorsed by the thinking class of physicians—that is, by those to whom William Wood & Company were indebted for their success in the past and on whom they must depend for their support, as medical book publishers, in the future; hence, that they would, for policy's sake at least, have supported the Association in its laudable efforts. But they have done just the opposite.

Through their periodical, the *Medical Record*, they—or their employe—have seen fit, in four editorials, to attack the American Medical Association, its officers and its present activities. Their criticisms—if these attacks may be so dignified—ramify into every phase of the Association, its management, and its work. Their object, it is quite evident, was to discredit the officers of the Association, to reflect on the Association itself and to create dissension among its members. The animus prompting them also is perfectly plain to those who know how the subscriptions to the *Record* have been falling off and also to those who have observed the mass of nostrums in its advertising pages. The

House of Delegates, the Board of Trustees and all the officers of the American Medical Association welcome honest criticism and suggestions that are made for the purpose of bettering conditions, but they resent attacks made to disrupt and to disorganize.

The editorials consist of insinuations and deliberate misstatements of facts and bear evidence of having been written by one who has little, if any, knowledge of the history of the Association, of the details of organization or of the work the Association is doing. These attacks should be ignored, but, appearing in a journal that in the past has been considered reliable, some of its readers have believed that there must have been some basis for the attacks, not realizing that the *Record* would stoop to malicious misrepresentation. Further, certain medical journals, for well-known reasons, have made all possible use of the matter. Knowing that their own outcries of "graft," "fraud" and "clique" were laughed at, they could now say, "You did not believe what *we* printed; now read what the *Medical Record* says."

It would be more satisfactory to quote *in extenso* from these editorials—for this would give our readers an idea of what they are, in which case no comment of ours would be necessary—but we have not the space. However, although the editorials were in the form of vague generalities, insinuations and innendos, it evidently was the intention of the editor of the *Record* to have his readers accept the following propositions:

1. That the policy and the management of the American Medical Association is in the hands of a self-seeking "ring or clique."

This insinuation is constantly made by the editor of the *Record*. What evidence has he for such a statement? On what authority does he insinuate that the House of Delegates composed of men elected from every state and territory in the Union and changing its membership every two years, is or can be dominated and controlled by a few men for their own purposes? Such a charge is absolutely false, is supported by no evidence whatever and is a direct insult to the representatives of the profession, who are chosen by their fellow physicians to administer and protect their interests. Never, in the history of the American Medical Association, was there assembled a more representative, fearless and independent body of men than that composing the House of Delegates at Boston.

2. That the "financial reports of the American Medical Association have been disquietingly analogous to those of insurance companies and have dealt in glittering generalities."

Had the solicitude of the editor of the *Record* regarding the affairs of the American Medical Association extended over a longer period than that of his own incumbency of his present exalted position, he would be aware that the reports of the Board of Trustees for the last few years have been far more complete and more detailed than at

any other period of the Association's existence. We recommended to the editor of the *Record* a casual perusal of the Association's proceedings, not only for the current year, but for preceding years, before he attempts to misinform his readers.

3. That there is, in the minds of honest and intelligent members of the organized profession, a suspicion of "graft;" that the accounts of the Association have been "juggled;" that "more than 23 per cent. of what should have been received in dues and subscriptions remains unaccounted for."

This also is untrue, and, furthermore, it is an infamous libel on the members of the Board of Trustees, who have, without one cent of pay and at a sacrifice of their own time and professional work, looked after the business of the Association. The members of the board are men of high rank in the profession and of unblemished personal character. On what grounds does the editor of the *Record*, by covert insinuation and baseless inuendo, attempt to question their integrity? The standing of each of them is as much above suspicion as the editor of the *Record* could possibly wish his own to be. What evidence or proof has he to justify him in attacking honorable members of his own profession? As a gentleman and a member of a scientific brotherhood, it is incumbent on him either to retract his statements or to produce such evidence as will justify his malicious utterances.

4. That the House of Delegates at Boston was dissatisfied with the report of the Board of Trustees and that it was denied details regarding the business of the Association.

This statement every member of the House of Delegates knows to be false. The report of the Board of Trustees was adopted by an unanimous vote. During the reading of the report, the complete pay-roll, showing every cent paid in salaries and wages to the 150 and more employes of the Association, from the Editor to the errand boy, was submitted to the House. Detailed statements, covering every item mentioned in the auditor's report, were submitted, or were ready for the information and inspection of the members of the House. We fear the *Record* was not very well served by its Boston representatives and we suggest that hereafter more reliable and accurate data be secured as the basis for future attacks. Incidentally, we are constrained to ask by what right the *Medical Record*, or its owners, the commercial house of William Wood & Co., demand the publication of the pay-roll of the American Medical Association for the scrutiny and information of any and all commercial interests. Is such a list published by any fraternal organization, by any company or by any corporation anywhere?

5. That the surplus of the American Medical Association is nearly a quarter of a million dollars.

The editor of the *Record* has perpetrated the sophomoric error of confusing surplus with assets. The actual surplus, as shown by the

auditor's report, published in *The Journal*, was $60,084.21. The assets of the American Medical Association, as set forth in the same report, were, on January 1, 1906, $247,482.91, but the editor of the *Record* failed to note, or was unable to grasp the fact, that this included real estate and buildings, furniture and machinery, stock and cash on hand, as well as bills and accounts receivable. We have the statement of the editor of the *Record* himself made some months ago, that "the editorial and the business departments of the *Record* are absolutely separate." If his conception regarding the surplus is to be taken as a sample of his financial ability, we can not but commend the foresight of William Wood & Co. in making such an arrangement.

6. That the Treasurer of the Association, to whom the editor of the *Record* sarcastically refers as a "prominent bank director and successful financier," is responsible for the investments of the surplus of the Association.

The most superficial acquaintance with the Constitution and By-Laws of the American Medical Association would have shown the editor of the *Record* that the Treasurer is simply the custodian, under heavy bonds, of the surplus funds of the Association, which he holds subject to the order of the Board of Trustees. The Trustees themselves, and not the Treasurer, are responsible for the investment of the surplus funds of the Association.

7. That the Association has become so big "that the number of papers presented in the various sections is too great to permit of their being assimilated by the hearers, or profitably discussed."

If our self-appointed critic had been in touch with the section work, he would have known that there have been for the last four or five years fewer papers than ever before; that sixty, seventy or eighty papers in a section was not an uncommon thing in years gone by; that now, by a general law, the number is limited to forty and that some of the sections have fixed a still lower limit, some as low as twenty-five. As the editor of the *Record*, so far as we know, never attended a session of the Association, he is excusable for this misdirected criticism.

8. That there is no need of the proposed medical directory; that the proceeds of the directory will increase the income of the Association to half a million dollars; that the sales of the book to non-members and the profits of the advertising will pay the cost of production and that the publication of the American Medical Directory is absolutely without excuse.

The consideration of the Directory demands a chapter by itself, which we propose soon to present to our readers. Suffice it to say at this point that the editor of the *Record* either has no conception of the objects of the Directory and what it will stand for, or else purposely ignores them. These matters have been fully discussed in *The Journal* time and again. In *The Journal* November 18, 1905, for instance, appeared a detailed statement of the plan and scope of the work, which

evidently the editor of the *Medical Record* has never read. This, however, is no excuse for his ignorance. His profound suggestion that the Association give away twenty thousand—now it would be twenty-six thousand—copies of the Directory to its members is too puerile for comment. We once more pause to congratulate William Wood & Co. that their editor has no connection whatever with the business department of the *Record*.

9. That there is "loudly expressed dissatisfaction with the present management all over the country, which is assuming definite form in the organizing of new state medical societies, and even serious talk of a rival national organization."

Will the editor of the *Record* kindly name any state in which a new state society is being organized? The Association office is presumed to know the actual conditions regarding medical organization throughout the country. But, evidently, this presumption is unfounded. The *Record* has discovered a condition that was not known to exist. Now, what are the facts? Never before was there less opposition to the plan of organization than now prevails in every state and territory, all but two being organized in a uniform basis. Until two years ago, there was opposition in several states; now there is practically none. In Georgia, immediately after the reorganization of the State Association, there was some disaffection on the part of a few physicians and some transient agitation for the organizing of another state society, but this amounted to nothing. In one country in Michigan, six dissatisfied physicians agitated the organization of a new state body, but nothing definite resulted. This movement was never looked on seriously by those connected with the state society. The disaffection in both instances was the result of purely local conditions in no way related to the American Medical Association and was merely a remnant of the disaffection that at one time prevailed in many states. Never has the profession been more united, never before has it been so influential, never have there been so few local jealousies, and never has there been a more hopeful outlook in every way than now.

10. That the Walker resolution, introduced at the Boston session, was defeated through the efforts of the officers or the Board of Trustees or their friends, and that an attempt was made to suppress an investigation of the business affairs of the Association.

Again, we are led to deplore the inaccuracy of the reports received by the *Record*. The facts are these: The moment the reading of the resolution was concluded, it was at once tabled by the practically unanimous vote of the House. There was no discussion. The members of the House cared for none. There was no time for the officers to express themselves even had they desired to do so. The statement that the resolution was opposed by the officers, the trustees or their friends is absolute falsehood, unless the entire membership of the House of Delegates is included under the designation "friends." The As-

sociation and its officers are fighting secrecy and deception and are not practicing it.

11. That at Boston "a strenuous effort was made to get rid of the Editor, and that so great has become the dissatisfaction with his administration that this endeavor might have been successful had the general body any voice in the management of the Association."

This statement is unqualifiedly false, as all who attended the Boston session well know. There was an opposition, it is true, and a bitter one, but it was limited to the horde of nostrum vendors who have been getting rich by humbugging and deceiving our profession, and to the owners or attaches of those medical journals nourished by the same brood, who allow themselves to be used as the mouthpieces and tools of proprietary interests. The Editor of *The Journal* of the American Medical Association knows full well that he is hated with a most intense hatred by these gentlemen and their allies, and that they would stop at nothing to secure his "dismissal," but he also knows and knows thoroughly and well, that the "management" was fully and completely endorsed by 95 per cent. of the physicians at the Boston session, and, for that matter, is endorsed by a like proportion of the physicians of the country, who know the truth of what is going on.

So much for the "facts" regarding the American Medical Association as set forth by the editor of the *Record*. Just a word as to that gentleman himself. He graduated in the spring of 1877 and so has been a member of the medical profession for 29 years. During all this time, his interest in the American Medical Association and in medical organization was so great and his enthusiasm so uncontrollable that in March, 1906, just ten weeks before the Boston session, he became a member of the American Medical Association. Truly, not without reason has the zeal of the new convert become proverbial. Had he devoted a small part of the 29 years of his professional life to a more careful study of the organization of which he was, at last, to become a member, he might have been able to discuss the Association's affairs intelligently, if not truthfully. During all this time, men whose membership in the organization number years while his numbers weeks were earnestly and unselfishly striving, not only to build up the American Medical Association, but to bring about better conditions in our profession. During the same time, what has the editor of the *Medical Record* done in this respect? Yet he now arrogates to himself the right to criticise and, by implication and by baseless insinuations to brand these same men as "boodlers" and "grafters."

Is it probable that the business interests of an old and hitherto reputable publishing house will be enhanced by the use of its journal as a medium for such malicious, unfounded and unwarranted attacks? We think not. However we commend this thought to the consideration of William Wood & Co., of New York.—(Editorial in *Journal of the Am. Med. Assn.*, September 15, 1906.)

COUNTY SOCIETY NOTES

CAPE GIRARDEAU MEDICAL SOCIETY.

At the August meeting held at Cape Girardeau, the program consisted of a "Symposium on Gastro-Intestinal Disorders Occurring in Infantile Diarrhea." The September meeting was held at Jackson and the subject of typhoid fever was up for general discussion. Both these meetings were well attended; the papers presented were interesting and instructive and the discussion by the members showed that this society is composed of men who are interested in society work and apppreciate the importance of the meetings.

The next meeting will be held at Cape Girardeau on Monday, October 1st.

The Cape Girardeau District Medical Society will hold its meeting at Cape Girardeau in October and a very large attendance is anticipated.

J. D. Porterfield, Jr., M. D. Secretary.

HENRY COUNTY MEDICAL SOCIETY.

Henry County Medical Society met in regular session Wednesday, September 12, thirteen members being present. Dr. Love, representative of the American Medical Society, was also present.

Dr. Gibbins read a paper on "Post Eclampsia" and reported a case. The paper was well discussed. Dr. R. D. Haire read a paper on "Local Anesthesia," in which he reported a number of cases showing the efficacy of this method of producing anesthesia. The paper was freely discussed by the members, many of them relating their experiences with local anesthetics.

Dr. J. E. Kunkler reported a case of tetanus in which the patient neglected to obey instructions carefully and the treatment therefore was not satisfactory. This paper brought out very general discussion.

Dr. Love was called upon to address the meeting which he did and explained his mission in connection with the efforts of the state association to increase the membership in the county societies. He said only nine per cent. of the physicians in the county were now members of the association and urged that strong efforts be made to induce all reputable physicians to join the local society.

Dr. Douglass read a communication from the officer of the state medical association in which it was stated that a representative would visit the county to assist in increasing the membership of the society and requested the members to lend all assistance in this direction.

On motion it was decided that new members eleced at this time

would be received as members until January, 1908, on payment of dues and fees for one year.

F. M. Douglass, M. D., Reporter.

HOWARD COUNTY MEDICAL SOCIETY.

Regular meeting was held at Fayette on September 7th, there being a good attendance of the members.

Dr. Bonham made report of the meeting of committee on Public Health and Legislation in St. Louis on July 10th (for full report see The Journal, August, 1906.)

Dr. Bonham reported a case of hysteria, which brought out a free discussion. Dr. Watts reported a case in which the left kidney was extirpated. Dr. A. W. Moore's case of cancer of the pancreas was reported verified by recent developments.

C. W. Watts, M. D., Reporter.

LIVINGSTON COUNTY MEDICAL SOCIETY

At the regular meeting of Livingston County Medical Society held at Chillicothe, July 11, Dr. W. M. Girdner was elected secretary to fill the vacancy caused by the resignation of Dr. J. F. Cherrington who has removed to Denver, Colorado. Dr. J. C. Shelton was elected to membership.

Dr. W. L. White, presented a tubercular patient for examination. The case proved to be very interesting and was thoroughly discussed.

Dr. W. R. Simpson reported a case of carbolic acid poisoning. This report brought out a general discussion particularly in regard to antidotes.

The next meeting will be held at Chillicothe on October 17th.

W. M. Girdner, M. D., Secretary.

PLATTE COUNTY MEDICAL SOCIETY.

The regular monthly meeting of the Platte County Medical Society was held in Platte City, September 5th.

After a general discussion as to the best course to pursue in preparing the programs, the following physicians were requested to prepare papers and open discussions on whatever subject they might choose, the same to be presented before the society at the next meeting: Paper by Dr. H. M. Clark, discussion by Drs. Spence Redman, Alva Naylor and G. C. Coffey. This paper to be followed by a general discussion of typhoid fever.

The secretary was instructed to publish the names of all members of Platte County Medical Society in the local papers at least once a month.

The next meeting will be held on October 3rd.

J. C. Coffey, M. D., Secretary

STODDARD COUNTY MEDICAL SOCIETY.

Stoddard County Medical Society met in regular session at Essex, September 5th.

Dr. Dawsey Ryan of Bernie was elected to membership.

The morning session was devoted to routine work and at noon the society adjourned for dinner. At the afternoon session Dr. W. B. Wynne presented a paper on "Incipient Tuberculosis." He reported a number of cases in which treatment had been very satisfactory. The paper was highly complimented by the members and brought out a full discussion of the subject.

Dr. T. C. Allen read a paper on "Medical Organization." Dr. Edward Moore read a paper on the treatment of Puerperal Eclampsia." Dr. T. B. Wingo reported a case of "Laparotomy under Local Anesthesia." The case was one of umbilical hernia in which general anesthesia was contra-indicated. The operation under local anesthesia was satisfactory in every particular.

The next meeting will be held at Acorn Ridge the first Wednesday of November. GEORGE W. VERNON, M. D., Reporter.

JOHN T. HODGEN DISTRICT MEDICAL ASSOCIATION.

At a meeting of the John T. Hodgen District Medical Association the following resolutions were adopted:

Whereas: In the recent investigations of several of the leading life insurance societies of the United States, no breath of suspicion of wrong-doing has been found to attach to the medical department of these societies, and

Whereas, the said medical department constitutes the cornerstone of the solid foundation upon which these gigantic financial institutions have rested until they have become arrogant and domineering, and

Whereas, they have recently issued to the medical examiners throughout the country an ultimatum as to fees which they expect to pay for their services, therefore be it

Resolved: That it is the sense of The John T. Hodgen District Medical Association that the recent act of the old line life insurance companies in reducing the fees of their medical examiners and in demanding the written acceptance of the same is both arbitrary and unjust;

Resolved: That such action is an insult to the intelligence and integrity of the medical profession and is characteristic of the disposition of corporations to over-ride the interests of the individual without in any way consulting him;

Resolved: That this association resent this action and pledge its membership to make no examination for such insurance companies as

have made the above mentioned reduction, for less than five dollars without regard to the amount of the policy;

Resolved: That this association recommend the adoption of similar resolutions by all county medical societies in the state of Missouri, and that these resolutions be published in the secular press in each county in this district, and in the medical press of the state, and that a copy of the same be sent to the medical directors of each life insurance company interested.

JOHN T. HODGEN DISTRICT MEDICAL ASSOCIATION OF NORTHWEST MISSOURI.

The physicians in the counties of Harrison, Worth, Gentry, and DeKalb met at Albany on August 9th and organized the John T. Hodgen District Medical Association of Northwest Missouri. Dr. W. E. McKinley, the district councillor, was elected temporary chairman and Dr. G. W. Whitely secretary. A number of cases were presented for examination and discussion after which the following officers were elected in the permanent organization: President, A. H. Vandivert, Bethany; 1st vice-president, Jas. C. Guinn, Clarksdale; secretay, A. C. Long, Denver; treasurer, J. W. Conard, Albany.

Drs. McKinley, Whiteley and Conrad were appointed a committee to draft a constitution and by-laws. One of the conditions of membership in the society requires that applicants shall be members of the state medical association, except in the case of honorary members. Meetings will be held quarterly.

The next meeting will be held at Albany on the first Tuesday in September at 10 a. m.